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MEDAL PRESENTED BY MAJOR-GENERAL JOHN SMALL, LIEUTENANT-GOVERNOR OF GUERNSEY, TO JOHN BRETON, PILOT OF H.M.S. "CRESCENT," 1794.

WE are indebted to Lieut.-Colonel P. Groves, of the Royal Guernsey Artillery, for the photographic reproduction of the medal which forms the Frontispiece, with the account of the circumstances under which it was conferred on John Breton. The incident referred to is one probably unknown except to close students of Naval History, so the photographs of the medal, which show its exact size, with the accompanying short account, may be of interest to readers of the JOURNAL. The medal, which is silver gilt, is now the property of Mr. Henry Turner, of Guernsey, who intends to present it to the Guille Allés Museum, St. Peter Port.

The medal was presented to John Breton by Major-General Small under the following circumstances:—

On the 7th June, 1794, Captain Sir James Saumarez¹ sailed from Plymouth in command of a squadron, consisting of the "Crescent," 36, "Druid," 36, "Eurydice," 24, and five luggers and cutters. His instructions were to ascertain what force the French had in Cancale Bay and St. Malo, and then return to Cawsand Bay. At dawn on the 8th June, when some twelve leagues N.N.W. of Guernsey, there being at the time a fresh north-easterly breeze, Sir James fell in with a French squadron of five vessels—two 50-gun ships, two 36-gun frigates, and a 12-gun brig.² Sir James did not consider himself justified in risking an engagement with so superior a force; he accordingly ordered the "Eurydice" (Captain Cole), a notoriously bad sailer, to make the best of her way to Guernsey; whilst his own ship, the "Crescent," and the "Druid" (Captain Ellison) kept under easy sail to cover her retreat. By 8 a.m. the "Eurydice" was so

¹ Afterwards Admiral Lord de Saumarez.

² "Le Scœvola," 50; "Brutus," 50; "Danæ," 36; "Félicité," 36; and "Terreur," 12.

far inshore as to assure her escape, so the "Crescent" and "Druid" made all sail. The French followed in hot pursuit, and their leading ship coming up, hand over hand, with the "Druid," Sir James, to save her from capture, hauled his wind, and, standing boldly along the enemy's line, fired a broadside into each of the five ships as he passed. The capture of the "Crescent" now seemed inevitable, but a providential circumstance saved her. Before leaving Plymouth, Sir James had met a well-known Guernsey pilot, Jean Breton of the "Castel," to whom he had offered a passage home in the "Crescent." Breton had a marvellous knowledge of the difficult navigation at the back of the island, and at this critical moment he offered to take the "Crescent" through a narrow channel where no ship of her size had ever passed before, and where no Frenchman would dare follow her. Sir James knew his man, and sent him to the wheel.

"You are sure of your marks, Jean?" he asked.

"Never fear, m'sieur," replied the pilot. "Yonder is your house, and there is my cottage; how can I go wrong?"

So the "Crescent" tacked for Vazon Bay, threaded the dangerous channel, and then rounding into the Russel, cast anchor in the roads, where the "Eurydice" and "Druid" had already arrived.

Lieutenant-Governor Small and his staff, with numbers of the inhabitants, had anxiously watched the contest from the western cliffs of Guernsey. All feared the immediate loss of the "Crescent" when they saw her bold manœuvre, and indeed thought Sir James intended to wreck her to avoid capture. One of the crowd regretfully remarked that Jean Breton was the only man who could possibly bring her through that channel in safety, little dreaming that Jean was then at the helm. General Small warmly congratulated Sir James Saumarez, and presented Breton with a silver-gilt medal in recognition of his skill and courage. Breton was also awarded £100 by the Admiralty.

THE PROVISION OF OFFICERS AND MEN FOR THE KING'S ARMY.

By Colonel W. T. DOONER, p.s.c., A.A.G., Thames District.

Wednesday, 13th March, 1901.

Lieut.-Colonel Lord RAGLAN, Under-Secretary of State for War,
in the Chair.

NEARLY ten years ago, in the theatre of the old building, I had the honour of delivering a lecture on the "Recruiting Question and our System of Enlistment," and I now venture again to appear before you to call your attention to a somewhat similar subject. We move slowly in this country of ours in connection with military matters, but, thanks in a great measure to the Institution in which we are assembled to-day, we do move. In the paper to which I have referred I made several suggestions, many of which were adopted, and with your permission I should like to refer very briefly to some of them.

One of the chief objects I had in view ten years ago was to make our Army as voluntary as possible, and to devise a system by which men who were so desirous should join the colours for three years and then pass to the Reserve. I also asked for an increase of pay for some of the non-commissioned officers, and all the rank and file, and I suggested that a much better use could be made of the deferred pay, as it was then issued, that "irresistible inducement" which was held out to the men to tempt them to go into the Reserve, and I ventured to point out that it should be abolished.

Some further proposals were made with a view of removing what some of the men looked on as grievances, such as having to pay for sea-kits when they were called on to embark for India or the Colonies, and that the worn-out clothing should become the property of the men; both these suggestions, I am pleased to add, were acted on, and, as far as the Regular Army is concerned, recruits are not now clothed in the derelict garments of some unclean predecessor. I also urged that those non-commissioned officers who held lance rank, and especially the lance-corporals, should be granted some extra pay. In 1891, there were no

paid lance-corporals allowed to a battalion or unit. A short time after an order was issued allowing forty paid lance-corporals per battalion, or five per company. I also suggested that it was absurd, that before a man could be discharged from the Army for bad conduct, his commanding officer must describe his character as "incorrigible and worthless," and that misconduct ought to be quite sufficient. The word "misconduct" was soon afterwards inserted in the Queen's Regulations, and in Section 32 of the Army Act, as a sufficient cause for discharge. I further pleaded, and this was my chief contention, that the soldier's position should be one shilling a day and all found.

Seven is supposed to be a lucky number, and it took exactly seven years to get all these proposals adopted. It was not, however, until nearly three years ago that the citadel was carried, and that the last and most important proposal was adopted by the Secretary of State for War.

Lord Lansdowne, in April, 1898, abolished deferred pay, and instituted a system of giving certain of the men one shilling a day. Unfortunately, however, the boon was hedged about with so many conditions, that it is very doubtful if it has assisted recruiting in the slightest; with some flourish it was announced that all ranks excepting warrant officers were to get an increase of 3d., which was called messing allowance; but it was also ordered that the men were not to be permitted to draw this allowance until they were 19 years of age, and that they must also be reported on as efficient soldiers by their commanding officers. It was also directed that men who enlisted for three years' colour service, were not to be given the allowance.

I do not know what could have possessed the authorities to have ordered these conditions, as the result from a recruiting point of view has been more or less disastrous. Some delver in finance, I suppose, had something to do with it; but to anyone who understands the ordinary class of man which enlists, the object is that on the first pay-day the recruit may realise that the Army is not so badly paid, and that he may then go out amongst his friends and tell them exactly how matters stand as regards his emoluments. Some unwise adviser, however, of the Secretary of State, successfully impressed on Lord Lansdowne that a very excellent way of saving a comparatively small sum in the Army Estimates would be to bind the increase of messing allowance about with the conditions I have mentioned, and it was discovered, that by doing so there would be a saving to the public purse in the pay of all soldiers during the first year of their service.

Before April, 1898, a soldier received the shilling a day, less his messing and other deductions, but he also was given £3 a year deferred pay. When the change was made, the £3 a year deferred pay was abolished, and a gratuity of £1 for each year of service was instituted. Thus a man enlisting at 18 now receives £2 less a year than he did formerly for the first year of his service; and therefore during his first twelve months in the Army, three of which he usually serves at the dépôt, every soldier is really worse off than he was before the change was made.

The effect of this system has not been to improve the recruiting of the Army, as was apparently expected; and, one by one, slight modifications have had to be made in place of at once recognising the inevitable, and putting all officers commanding regimental districts and recruiting officers in the position of informing every intending recruit that he will receive his clear shilling a day from the day of enlistment.

First let me deal with the age question, that no man is to receive this messing allowance until he is 19 years of age. The effect of this order is that all men enlisting are tempted to say they are 19; of course, if they understand the Regulations thoroughly they will all give their age as 18½ years, because, in addition to the age condition, a man has, as I have mentioned, to be considered efficient by his commanding officer. The authorities have practically ruled that being efficient means that a man must have six months' service, by which time it will be assumed that he has learned his drill, musketry, etc. My hearers will therefore understand that the official age for all recruits to enlist at is 18½, so that a man on reaching his official nineteenth birthday may become entitled to his messing allowance of 3d. a day; the men therefore are more than ever tempted to swear falsely regarding their age and make themselves older than they really are.

I am not here to-day to lay before you, or to ask you to discuss any great scheme of Army Reform, or to make any proposals which will upset or injuriously affect our present system. For a voluntary Army like ours I think the present system of enlistment, which allows the men as far as possible (if their conduct is satisfactory) to do exactly as they please, within certain limits, regarding their time with the colours is an excellent one; and if some slight improvements were made involving a little extra expense, I think it would be found that we should get sufficient officers and men for the wants of our Empire.

There will probably be different opinions regarding what the wants of our Empire may be. Our Army, in comparison with foreign Armies, is, of course, ludicrously small; including Regulars, Militia, Volunteers, Colonial troops, and all other sorts of men we can by any stretch of imagination call soldiers, we only have about 2½ soldiers to every 1,000 of population, while France has 112 and Germany about 60. The total population of the Empire is about 386½ millions, and our total Army scarcely reaches 900,000, while the area of the Empire is nearly 12,000,000 square miles. I am presuming, however, that after the South African War is finished matters will gradually settle down as they were before it commenced, with an increase of a small permanent garrison for South Africa, probably 5,000 men in addition to the former garrison of the Cape and Natal.

There would be nothing gained to-day by my referring to the organisation of our Regular and Auxiliary Forces, nor by asking you to discuss the advantage in having between 300,000 and 400,000 Militia and Volunteers with uniform on their backs and rifles in their hands, not thoroughly trained, nor supplied with the proper proportion of cavalry, artillery, transport, or medical arrangements. I will not ask you to con-

sider whether an armed crowd firing rifles from behind hedgerows is to be considered sufficient for the defence of these islands; nor will I refer to the question deemed so necessary by many, but which I think would be a terrible waste of public money, viz., that three army corps should always be ready for immediate embarkation. To have even one army corps always ready to go on board ship, I venture to think would be quite unnecessary, and would add enormously to the Army Estimates, as the ships must be ready also, and these vessels would possibly be out of date before they would be required. The recent mobilisation proved how unnecessary such a regulation or order would be. In many cases, divisions were mobilised, and, in order to cause as little inconvenience as possible to the men, ten days were given to them to report themselves. It was found that almost all joined on the last day named in the order, but after this date many of the battalions were frequently on board ship within three to seven days, and on their way to South Africa. With such an experience, what would be the object of keeping such a force as even one army corps always prepared and ready for embarkation?

I will not bring before you the wisdom or otherwise of weighting men in marching order with 60 lbs. or more, and then expecting them to march 15 or 20 miles and fight a battle at the end of it. I have no intention of making allusion to our army corps organisation borrowed from our Continental neighbours, and whether it is suited to our requirements. In South Africa it fell to pieces at once. All these matters must be dealt with by others. But acting on the principle that there is no use in bringing forward any scheme of Army reform for our Regular Army unless you have an Army to reform, I have decided to-day to ask your consideration for only two matters—our officers and soldiers, and how to obtain them. It seems a suitable time to do so, as owing to the war in South Africa the question of how to find drafts for India and the Colonies is already reaching an acute stage.

Conscription.—There are, it is recognised, two methods of obtaining an Army: either by some form of compulsion or voluntarily. Our Army is, I think, happily a voluntary one, and I trust will ever remain so. Volunteers are always to be preferred to pressed men, and I have always considered it a grand idea that in our Army there is not one man in it who is not there of his own free will. Conscription or any form of compulsory service has not yet, I venture to hold, come within the region of practical politics, and there does not appear to be the slightest prospect of any Government proposing its adoption in these islands, until it is shown conclusively that the voluntary system has failed. I am not aware that any Member of Parliament has ever ventured even to allude to such a subject as compulsory service in his address to his constituents. Conscription, or any form of compulsion, is at present against the feeling of the English people; in their present temper they will not have it, and it is exceedingly doubtful if there is any necessity for it. The nation will consent to pay any reasonable sum to have a voluntary Army, and

the great majority of the people have most liberal views with regard to the payment of our soldiers. If it is considered necessary to increase the Estimates to get officers and men, there is never any opposition to any reasonable proposal asked for by the responsible Minister, and declared to be for the good of the Service. I, therefore, will not detain you further by referring to conscription; the experience gained two years ago, when even the Militia Ballot Act was referred to in the House of Lords by Lord Lansdowne, ought to be sufficient answer to those who hold the view that compulsory service for even home defence is in the least likely to be proposed in the near future by any Government. There appears to be no probability of such a Bill being brought forward. Some of us military men may dream or hope for such a consummation as compulsory service for home defence, but the political barometer does not point in such a direction, and I scarcely think I need dwell any longer on this subject.

Officers.—I will, therefore, at once draw your attention to the means adopted to get our officers and men under a voluntary system. As regards the officers, there will always be an ample supply, and the method adopted of passing cadets through Woolwich and Sandhurst, and allotting a proportion of vacancies to the Militia, works well. It does not seem as if there is any intention to make any change, and the system or systems, if only given fair play, would meet all our requirements. Sandhurst and Woolwich have always yielded good results, and the only question is, should officers be permitted to enter the Regular Army through the Militia. I beg to answer in the affirmative; it is an excellent arrangement, both in time of peace and in time of war, for the Militia and Regular Army. In peace it keeps the ranks of the Militia more or less full, and would always keep them complete if only those in authority could make up their minds as to how many vacancies for the Regular Army can be allotted yearly to the Militia. In some years the commissions granted have fallen as low as 80 for the Line, 40 being allotted half-yearly; while on other occasions the number has risen to 200 or more, and as a consequence a candidate does not know what amount of competition he will have to face. It would be exceedingly easy to allot 75, or perhaps more, infantry of the Line commissions half-yearly to the Militia, and let it be known that this number would never be decreased; this would be a fair proportion and would have an excellent effect in keeping the battalions of that force up to their strength in officers. If 150 or 200 candidates go up for these 75 or more vacancies, as would generally be the case, so much the better for the country and for the Militia. It must be recollected that all the candidates competing are exceedingly well instructed in the military subjects by those who have prepared them—so-called crammers—a term which has little meaning, but which I am inclined to define as men who know their business. These instructors have to rely on their teaching as a profession, and, if unsuccessful, their pupils decrease in numbers. The candidates also must have served two trainings with their battalions. I have found—perhaps, it depends on the Militia battalions to which they belonged, the commanding officer, adjutant, etc.—

that the majority of Militia candidates were sufficiently prepared to take their places in the ranks on joining, and were fit for duty. One thing is very certain, that in the military subjects these officers have been hitherto exceedingly well informed. The winter sketching or the promotion examinations are little or no trouble to them, and in my opinion the system of officers getting commissions through the Militia ensures our having in that force a very fairly instructed body of young officers; and we get the pick of them for the Line. Some have called these candidates for the Regular Army "birds of passage," and they may be so designated, but it must be recollected that the so-called birds of passage have hitherto had a good knowledge of topography, military law, fortification, and tactics; they are on the strength of their battalions, and available when called on should war break out. The present leader of the Opposition, when Secretary of State for War, called this system of officers entering the Army through the Militia a back door; but I should, indeed, like to be informed by that distinguished statesman, or anyone else, how in the end of 1899, when it became evident that the war in South Africa would be prolonged, and when it was found that the army corps sent out was quite insufficient for the task before it, officers would have been found to fill the war casualties occurring at the front, and the vacancies in the battalions ordered abroad, if we had not had the Militia, this so-called back door, to fall back upon. But for that force we should not have had an instructed candidate of any kind; those studying at Sandhurst were almost immediately drawn upon and absorbed. Some of the battalions of the Regular Army on the peace establishment were eight or nine officers short of their required numbers when they received the order to mobilise. Sandhurst could not furnish sufficient, but fortunately we had the Militia to help, and commanding officers of battalions were called on to recommend officers for the vacancies; many of those who were so recommended had qualified at the Competitive Examination, having failed, perhaps, by only a few marks; and I am sure the knowledge they had gained from their various private instructors was of the greatest value to them while on active service.

The only objection to this system which I am aware of is that a Militia battalion may suddenly find itself short of three or four subalterns, should that number be successful in the Competitive Examination. This, in time of war is, perhaps, a serious consideration, but it can be practically avoided, and at little expense to the public, by adopting a proper and consistent organisation for the Militia, viz., that each company should have two subalterns instead of the present extraordinary system of an average of $1\frac{1}{2}$ of a subaltern. Each battalion of eight companies under the existing arrangement is entitled to have one subaltern per company, and also four per battalion extra are allowed; thus an eight-company battalion has twelve subalterns. This organisation is meaningless. A company should either have one subaltern or two, but there can be no sense in having $1\frac{1}{2}$. By far the better organisation is two per company, and the experiences in South Africa show that this number is absolutely necessary. In peace, it is true, a company can get along

with one subaltern officer, but on active service two are a necessity. An eight-company battalion, therefore, ought to have sixteen subalterns, and then, if it should happen that two or three officers passed into the Regular Army at an examination, the work in peace-time could still be carried on efficiently and without difficulty.

The object of the State should be to have as many trained and well-instructed officers as possible ready for any emergency, and this system of having Militia officers ready is an excellent one. I suppose, also, a more economical one could not possibly be devised, as the expense to the public annually under normal circumstances of training a Militia subaltern is £14 or £15, his pay and allowances for 27 days. All his other instruction in the military subjects is carried out at his own expense. Therefore, the extra cost for four more subalterns per battalion would be about £60 per annum, or less, to the State.

While on the subject of the Militia and the system of supplying officers therefrom for the Regular Army, may I mention that it would be far more convenient for battalions, and a comfort to commanding officers, if the half-yearly spring examinations could be held at any other time than in March? By holding the examination in March the result is usually announced at the end of April or beginning of May, just as all the battalions are being called out for their trainings. A commanding officer thus, at the most important time of the year, just as his battalion is assembling for training, finds himself, under the extraordinary organisation I have mentioned, short, possibly, of two or three subalterns. There is no time to replace them, and even if a candidate for any vacancy can be found he is quite untrained, and knows nothing whatever of his drill or duty, in fact, is more or less of an encumbrance. Thus commanding officers, through no fault of their own, have this extra difficulty to contend with, of their battalion coming out for training short of officers. It would be far preferable if the examination could be held early in February, the result being announced as soon as possible, so that there may be a chance of filling the vacancies, and that the candidates may get some little instruction at the *depôt* before the battalions assemble. The autumn examination is not so important, and it is immaterial whether it is held in August or September.

Military Messes and Bands.—As I am dealing with the question as to how officers are to be obtained for the Army, and as the expense of living in the Service largely enters into this subject, the question of military messes deserves some notice.

There is no reason in the world, which I am aware of, why a well-managed military mess should not be the cheapest and most economical place in the world to live in, and it is to be hoped, for the sake of the officers of the Army, that regimental messes will never be abolished. The regulations concerning their management are excellent, and in a measure just to all concerned, and if carried out, in spirit as well as in letter, I think that even subalterns with a reasonable allowance would be able to live well and comfortably.

There is a sort of recognised rule in some corps of the Army—there is no regulation, I believe, on the subject—that the messing should not exceed 4s. per diem; in some well-managed corps it is slightly less. It can easily be done for this sum if there are twelve or fifteen dining members. I have catered for officers and fed them well for less than 4s. per day, but it requires much supervision, and entails a visit each morning to the larder and kitchen, and a careful inspection of the bill of fare and tradesmen's books.

I wish to let all commanding officers know that it can be done in most stations for 4s., and the best way, in my opinion, to get it carried out is to divide the duties of the Mess Committee. The president should superintend the accounts, and the other two members, instead of, as is usual, doing in reality nothing, should supervise, one the catering, while the other member should look after the wine-cellar. This is a fair division of labour, and the commanding officer should exempt certainly the caterer from any regimental work possible.

We start then with the necessary expenses of 4s. a day for a young officer, and in addition he will have to pay, as mentioned in the Regulations, in subscriptions, 10s. to 15s. a month—in some corps this amount is divided under different headings, but it all sums up the same; possibly also there may be some small subscriptions to cricket and rifle clubs; but the total compulsory payments, including mess guests, need not necessarily exceed £7 to £7 5s. per month. The item "mess guests" in some regiments is small, especially for subalterns, if the Regulations are carried out, and also that care is taken to test every small expense charged to this item. It is ludicrous to find how much is put down under this heading daily, unless proper supervision is exercised; and if care is taken, it will be found that the expense will decrease to an enormous degree. As to large entertainments, it is a question for the commanding officer and those belonging to the corps; it would be useless my entering into them, and any subscription to them is voluntary.

I have thus shown that in a well-ordered regimental mess the compulsory payments are about £7, or slightly more, per month, and if we add to this sum £2 to £3 for wine—some officers incur much less under this heading—there is no reason why an officer should have to pay for his mess bill more than about £9 to £10 per month. I have many times looked at the mess-book of my battalion and dépôt, and found it about this amount, or considerably less for a careful officer.

I could give many and amusing examples of the letters I have received from fond parents of young officers concerning their sons' mess bills, but I invariably made the same reply that if their sons could not get on without drinking champagne and other similar wines, smoking expensive cigars, and also insisted on injuring their dinners by eating enormous and unnecessary teas, naturally their mess bills would be high, but that I hardly thought it my duty to interfere.

While on the subject of officers' messes, I might, perhaps, mention—some commanding officers might like to know it—a system by which

accounts can be examined quarterly, before the usual mess meeting, in a very easy manner. The great point is, to take care that the mess fund and the catering fund are kept quite distinct. If they are kept in one account, it is a great source of confusion and irregularity. With regard to the catering, it is only a matter of seeing that the tradesmen's bills and the cooks' wages are paid. Regarding the mess fund, it is quite easy to direct the mess president to send to the orderly-room by the 10th or 12th of the first month of each quarter a statement, showing on one side the receipts credited to the mess fund, and on the other side the charges against that fund; and by this the balance credit is seen in a moment. On one side should be shown the receipts, such as officers' subscriptions and donations credited through Messrs. Cox & Co., also the usual King's allowance of £24 per annum per company, the monthly subscriptions of officers, and any profit on wine, etc. I shall, probably, surprise many when I say that this all adds up to over £500 a year, and is for keeping the mess in order, paying servants' wages, liveries, newspapers, and furniture, and, as the Regulations direct, for decreasing the cost of wines. This sum, if well looked after, is sufficient. It must be added, however, that it is scarcely fair of the Regulations to order the deductions of eight days' pay a year, which are made for the mess, and the twelve days' pay which are deducted for the band; thus, the officers have twenty days' pay taken from them *volens volens* every year. It is bad enough to have to pay large contributions of thirty days' pay to the mess and twenty days' pay to the band on joining a corps, but, in addition, to have to pay these subscriptions is very unreasonable. Thus, if we take an unmarried major, he will have paid an entrance of fifty days' pay at 16s. to the mess and band—total £40; in addition, he has to pay annually twenty days' pay of £16. Similarly, an unmarried captain will have paid £29 9s. 2d. entrance, and is mulcted annually in £11 11s. 8d. Messes and bands are essential for the credit of the Service, and the Government should assist. It must be recollected also that officers of the Army, especially when stationed abroad, frequently entertain foreigners, and the officers of ships of other nations, for the credit of their regiment, the Army, and the nation, to which we all belong. The Government might well help by giving each corps a small grant of about £100 a year to the officers' mess, to be called an entertainment or table allowance, and directing that in future the subscription of eight days' pay per annum will not be deducted from each officer.

The deductions from the pay of officers to keep up a band should cease; it is scarcely fair if the State consider a band necessary for each unit, that, in addition to the large contributions I have referred to a lieutenant-colonel should also have to pay £7 4s. per annum, a major £6 8s., and a captain £4 12s. 8d., in order to keep the band going.

Why Lord Cardwell should have considered it right to exempt the subalterns from this tax, but to have decided that the captains and field officers should be mulcted in the way they are, has always been a mystery

to me. It is to be hoped that this order will disappear from the next issue of the King's Regulations.

With regard to officers, therefore, and the expense of living in the Army, I hope I have shown that in a well-ordered battalion, and with the charges regarding mess and band subscriptions, which I have suggested, removed, it would not be difficult for a subaltern in the infantry to live on his pay and about £100 a year. If he has more, so much the better, he can then indulge his tastes and hunt or play polo; but it is ridiculous to say that these are necessities. If any increase of pay is decided on it should be given to those who gain field rank or become commanding officers; much is expected of the latter, but their pay and emoluments are absurdly small. No one starting at any profession—lawyers, clergymen, medical men—can possibly, for some years, hope to make both ends meet. Serjeant Ballantine stated he did not make bread and cheese for many years; and it is unreasonable for parents, because their sons pass out of Woolwich or Sandhurst, and get their commissions, to therefore conclude they will not need further pecuniary assistance. In normal times promotion is slow, and an officer may not gain his company for ten or twelve years—many of my hearers were probably twelve years or more in getting their captain's rank—in such cases some increase of pay after seven years, not ten years as it usually works out, might be granted till the captain's rank is reached.

Instruction of Militia and Volunteer Officers.—Before I leave the subject of the officers of the Army, may I mention, with regard to the Militia and Volunteers, that the officers do not get much encouragement to learn their duties. The difficulties in their way are very great. They often have to apply many weeks, or sometimes months, before a class will assemble in order to get leave to attend it, and when, perhaps, after long delay owing to the routine which has to be gone through, the permission is given, it is then too late for them to upset all their private arrangements or business, and they cannot attend. If their time is valuable, as it is in many cases, they cannot wait while replies are filtering through all the various offices. They should be encouraged in every possible manner to improve their military education, and with a view of doing this all captains of Militia and Volunteers who succeed in passing the usual examination for promotion to higher rank in the subjects referred to in the Regulations as (C) to (G), should be given some reward for doing so. The authorities would, I think, be well advised in offering some fee like 25 guineas or more to all Militia and Volunteer captains who pass these examinations for higher rank, as we should then, in a short time, have well-educated officers in the Auxiliary forces, who, in times of difficulty like what we have gone through in the last eighteen months, would be available and fit for almost any employment. Of course, in the case of the subalterns, if any fee is given, it need not be so much as for captains, as very many of the subalterns who have been candidates for the Army will find less difficulty in passing the ordeal. In the case of captains every encouragement should be given to them, and

those officers who are successful should always be selected first, and in preference to any other officers of the Auxiliary forces, for any appointment or employment which might be vacant and suitable.

Non-Commissioned Officers and Men.—Having thus discussed the question of officers, I now turn to the rank and file of the Army, and it must be evident, I consider, that what a man enlisting wants to know is, how much he will receive from the moment he joins the Army—not what he will receive after a year or more, provided he fulfils certain conditions, and which conditions he invariably thinks are hedged about with some sort of regulation which he does not understand, and which he may not be able to fathom or be equal to. In April, 1898, when the new rules regarding messing allowance were issued, in order to let them be well known in the regimental district I then commanded I published the following notice. It is hanging from the table:—

“All efficient soldiers enlisted for seven years’ colour service in the Regular Army now receive 1s. per day, and clothing and food free, on reaching nineteen years of age.”

I was compelled to insert the word “efficient,” as even men who enlist at nineteen years of age, or indeed at any age, do not at once receive the shilling a day, but must, as already mentioned, wait until their commanding officer considers them efficient, which, being interpreted, means that they must, exclusive of days of absence on leave or in hospital, have been under training for six months. This condition was, I think, most unwise and, from a financial point of view, an error. It only leads to misunderstanding on the part of the men, who, when they find out their mistake, get disappointed and absent themselves or desert; and when apprehended, the expense caused by escorts being sent for them, I imagine, far out-balances the saving, to say nothing of the injury done to recruiting by prisoners in plain clothes, and handcuffed, being sent with escorts all over the country. Even Militia service, until quite recently, was not allowed to reckon in this six months required for efficiency; but now this barrier has been removed. I hope, however, it will be understood that a man who has not been in the Militia, and who joins at nineteen or even twenty or later, does not receive the shilling a day until he has six months’ service, and, possibly, even then he may not be granted it. Such rules and regulations are mistaken policy and false economy.

I have referred to the notice I issued at Armagh when these rules came into force in April, 1898; what was the result? It was looked on with a little suspicion. In one of the battalions—it may have occurred in the others—of the Militia brigade, when out for training, and where I had these notices posted up, a discussion took place. I am afraid the men did not use the gentle language I am giving this audience, but it was to the effect: what did Colonel Dooner mean by an “efficient soldier”? It was only reasonable that such a question should be asked. But this will show you some of the difficulties recruiting officers have to contend with. The thinking men among our would-be recruits, the men who like to know what they are doing, and the men we want to encourage to enlist are

deterred from joining, and possibly many a good soldier is lost to the Army.

It is the business of the officers of the Army to make a man efficient, and if a recruit cannot be turned into a soldier, which does not often happen, he can be discharged. It may be added also that it is the business of the medical and approving officer to see that men before being accepted are of the necessary age and physique; and, therefore, I think the authorities would be well advised in deciding that, when once enlisted, the men should be given their clear 1s. a day pay.

There are two other stoppages which should be mentioned, and which all soldiers, irrespective of age or efficiency, have to pay. They are small items—the washing and hair-cutting—and these are still a charge against the private soldier. They do not amount to much, the former being $\frac{1}{2}$ d. a day, in some corps a penny, the latter 1d. per month, or a total of about 1s. 4d. to 2s. 7d. monthly. It would be well if they could be paid by the public, and thus abolish every compulsory stoppage, so that the steady, careful soldier may know that he will get his pay without any deductions. If this were done, an Army notice could be issued that all men joining the infantry of the King's Army receive 1s. a day and are all found. Here would be a short unvarnished tale better than any animatograph or doubtful notices with long explanations, which invariably cause suspicion on the part of those who may read them and who are meditating enlistment. The bargain with those enlisting should be free and open, so as not to leave the smallest loophole for grumbling. The question of the State paying for the hair-cutting is really not very important; it is, as mentioned, only 1d. per month, and the men have not much objection to paying it, as the total amount deducted from them goes to a comrade, the company hair-cutter. It is not very material who pays it, the Government or the soldier; but I recommend the stoppage being done away with. To abolish it will involve about an extra £10,000 a year to the State.

The Militia.—Non-Commissioned Officers and Men.—I now come to the Militia, and as this old constitutional force is, as far as can be estimated, 20,000 or more under its establishment, and, as I venture to think, it is a very valuable part of our Army, and one to be encouraged in every possible way, I beg to maintain that it is a great mistake not to give the extra messing allowance of 3d. a day, irrespective of age and service, to all Militiamen. I have always impressed on all men enlisting to join the Militia first, in order that they may see for themselves what the discipline, pay, etc., of the Army is, and then, if they like the Service, they could decide on going on to the Regular Forces. This, however, is what we cannot let them, as far as pay goes, learn practically in barracks at the headquarters of a regimental district, as no Militia recruit, or, indeed, any recruit, can, in any possible way, from experience learn what the pay of the Army is. Under present regulations a recruit cannot be paid more than about 8d. per day, and thus a Militiaman after his 49 days' drill goes away from the dépôt with quite a wrong impression of the Army and its emoluments.

I should mention here that Militia recruits are allowed to enlist at, or after, 17 years of age, and therefore some of my hearers may say they should not get the clear shilling at that age. In connection with this point, however, it must not be forgotten that during the first year of his service the State only pays the man for his 49 days' preliminary drill and 41 days' musketry and training—total, 90 days. The recruit then goes away, and has to earn for himself, as he cannot enlist in the Regulars till 18; he is, therefore, of no further expense to the State. Giving then each man the extra messing allowance for 90 days is only £1 2s. 6d. each, and it would be money well spent, as the object is that the recruit should return to his village and tell exactly what pay he received. When the total of the Army Estimates is considered, the extra expense of granting this mess allowance would, in the words of the prophet of over 2,500 years ago, be a mere drop in a bucket; but its being sanctioned would give every recruit drilling at the depôt, and out for training, a truthful and clear idea regarding the Army and the soldier's pay; and this would be most useful, and assist recruiting greatly for the Regulars.

When a Regular or Militia recruit enlisted, and behaved well, and paid attention to his drill, etc., I always endeavoured to give him leave, when he could be spared, to go and see his friends and relations. This I always did, as regards the recruits for the Regular Army, giving them seven days' furlough so that they could take their week's pay with them. In Ireland, also, the railway companies do not grant the return ticket for the single fare for soldiers unless the furlough is for seven days. This giving, however, of short furloughs to Militia recruits during their preliminary drill or training, cannot be carried out; as in these days of decentralisation an officer commanding a regimental district, or even the general officer commanding, cannot give a Militia recruit any leave exceeding three days with pay without referring to the Secretary of State for War. Of course, by the time the answer would be received the necessity for the leave would have passed; but the idea that a colonel or general officer could not be trusted to give a recruit, whose mother or father might be dying, or dead, seven days' furlough with pay is almost comical. My object in giving recruits seven days' furlough was to encourage them to learn their work and duty, and it is these men going to their villages, if they are contented and happy, who are the real recruiters for the King's Army. If a man goes to his relations for a week, and arrives home clean and smartly dressed with his week's pay and ration allowance, total 10s. 6d., all his friends see for themselves, and the result from a recruiting point of view is sure to be satisfactory. I hope soon such men will also be able to take with them their messing allowance of 1s. 9d. per week, so that they may have a total of over 12s.

It is essential that men going on furlough should always arrive in their town or village with sufficient money. I could give many examples to prove my contention, but two will probably be sufficient. A steady good soldier of the Royal Irish Fusiliers went on furlough to a village in the Queen's County, and shortly after five men were one morning brought before me who had arrived to join the depôt

at Armagh, from the village where this man was on leave. I hope it is understood that these men did not come before me for final approval—that duty had been carried out at Naas—but I made it a rule to see and speak to every man who joined the depôt, and also to ask him did he understand the small notice you see hanging from the table, and which was handed to every recruit in the receiving room. As these men came from Queen's County, I enquired why they had chosen the Royal Irish Fusiliers, and I found it was all the work of the man who had gone on furlough. These five men had made their way to Maryborough, were then passed on to Naas, and had been forwarded from there to Armagh; they were, of course, reckoned in the recruiting returns as from the 102nd Regimental District—that is not very important—but while they were under my command at Armagh they never committed themselves, and I have no doubt they made excellent soldiers. They knew and had seen this man on furlough; he drew the messing allowance, and I think he had two good-conduct badges, and they came to the conclusion the Army was not so badly paid. Of course, when they came before me I had to explain to them concerning the 19 years of age and efficiency condition, and that they could not get the messing allowance for a year or so.

An exactly similar case occurred at Drogheda. I sent a man on furlough there, and one morning three men came in, and the same procedure had to be gone through. These two examples will show what well-conducted, fairly-paid men going on furlough may do for the recruiting of the Army. What we really want are contented soldiers, and this is the way to get them; they are the best advertisement for the Army. Of course, recruiting sergeants are a necessity to do all the required work of making a preliminary medical examination and then getting the men attested and forwarded to headquarters; but this, and giving advice, ought to be all that is necessary. What I should like to see is, outside all post-offices, a short but prominent notice of the kind I have mentioned, and that all men desirous of joining the Army should apply to the recruiting sergeant at wherever the nearest place may be. I think if the clear shilling a day can be granted, and if a plain notice of the kind I refer to can be placarded through the country, it will not then be necessary for recruiting sergeants to be hanging about public-houses to try and enlist the sort of men who frequent such places.

Militia Bounties—The question of bounties to Militiamen requires some amendment; they ought to be increased, especially for Militia Reservemen—a most valuable body of men, and who have done their work well in South Africa. The bounty given to a recruit might also be better divided. At present the £2 bounty is given—10s. at the conclusion of the preliminary drill, and £1 10s. at the end of the training. This latter leads to misunderstandings, as at the end of other trainings the man gets only £1; a better arrangement would be to give each recruit £1 at the end of the preliminary drill, and £1 at the conclusion of the first training. This question of bounties, it may be mentioned, was dealt with by the Secretary of State on Friday evening last in the House of Commons.

Those who argue that the Militia should not be used as a recruiting ground for the Line are, I venture to think, greatly in error; one writer in a recent article in a magazine likens the Militia to a milch-cow, and insists that the Regular Army must have its own methods for keeping its ranks full. To those who hold such views I would point out that the Militia is the only part of our Service which a man can join and if he does not like the military life he can then under normal conditions purchase his discharge for the small sum of £1. In the Regulars such a discharge costs £10 within the first three months of enlistment, after three months the expense is £18. It is, therefore, evident that all men who are at all doubtful as to whether the life will suit them should at first join the Militia, and I always advised recruits to do so. It is for this reason that it is so desirable that Militiamen should be given exactly the same pay and allowances as men in the Regulars.

Annual Training.—The length of the annual training of the Militia requires some consideration. At present, owing to its only being about twenty working days, the musketry and all instruction are fearfully hurried. Thus the brigadier can never get an opportunity of teaching his brigade anything. I do not think it would inconvenience anyone, officers or men, to extend it for one week to thirty-four days. This would then give some time for brigade work and practising the higher military subjects, such as outposts, attack, and defence, in a thorough manner. It is also most difficult to decide the best time for the annual training with due regard to recruiting. In the West of Ireland many recruits are lost if the trainings are not completed by the 1st June. The returns of the railway companies show that the number of tickets to harvest-men for England issued in June is enormous. Each of these men bring back to Ireland about £10 each, and they cannot sacrifice this money. If, however, the present bounty was raised, and that the trainings could be got through earlier, which would, I fear, involve barracks being made available owing to the climate, a new source of supply would be tapped; and some of the West of Ireland battalions, now so much under establishment, would then possibly be able to increase their numbers. The fact is, local difficulties must be more weighed and considered; what applies in the West and North of Ireland is inapplicable to the South of England.

Employment of Reservemen.—The subject of employment for the men on leaving the colours is, of course, very important, and has much to do with recruiting for the Army; but this question has made great strides for the better in recent years with all the numerous agencies now at work, and the patriotic way in which most large employers of labour take reserve and discharged soldiers into their employment. In future years, however, I think it will be found that more men than formerly will remain with the colours; and this will be especially the case if the rules regarding foreign service are a little relaxed and that men are not kept so long abroad as at present. The existing Regulations direct that when a non-commissioned officer or man has completed six years' in India—formerly it was eight, with some exceptions—his name

can be registered to be brought home. This very often means that the man does not get home before seven years or more have elapsed, as the returns are not sent to War Office until the 1st July in each year. This regulation militates against men staying with the colours.

On one occasion seven Reservemen were going through the usual three days' drill on the parade ground at Armagh; six of the seven were well dressed and fairly satisfied with the civil employment they were in; the appearance of the seventh spoke volumes as to his character, and showed conclusively why he was not in satisfactory employment. I asked them all why they had left the colours; of course, the seventh man could not have remained even if he had been so desirous, owing to his character, as I afterwards found out from his papers. They all gave the same reply—they had been in Burmah and India for three or four years, and they knew if they prolonged their service with the colours they could not get home for a change for some considerable time, so they went to the Reserve. I think, therefore, the Regulations I have referred to should be altered, and that all officers, non-commissioned officers, and men after five years' foreign service anywhere should be allowed, if desirous, to return home, and not be available again for foreign drafts for two years. The regulation makes the period for the Mediterranean and other good stations as five years, and for India, as I have mentioned, six. This seems inconsistent—probably the expense of the passage has something to do with it—but with a voluntary Army, and also from a humane point of view, expense must not be considered.

It is clear that a man enlisting for seven years, and then kept for the extra year, making eight in all, has to usually spend at least five or more of those years abroad, and if he is in an indifferent climate, even for health's sake he should get a change and be permitted, if he wishes it, to return to the home battalion or the dépôt.

The example I have given shows, I think, that Army Reservemen transferred with very good or exemplary characters are seldom out of employment, and that many of these men, now that the "irresistible inducement" of £21 to £24 is not given them to go into the Reserve, will remain with the colours if the tour of foreign service is reduced, as I suggest. Should the latter happen hereafter, it will always be easy to allow men so desirous, and in accordance with the exigencies of the Service, to go to the Reserve after three or five years' service, so that the strength of the Reserve may be maintained.

Rejection of Recruits on Physical Grounds.—Under the present standard of height, etc., laid down in the Recruiting Regulations, it is found that about 40 per cent. of the men offering themselves for enlistment are rejected on medical grounds, and among those rejections are many who would make most useful mounted infantry soldiers. At present a man enlisting for the Regular infantry must be 5 feet 3 inches in height, but a driver in the artillery is accepted if he is 5 feet 2 inches. The present rules regarding training mounted infantry will probably be considerably modified later on, and possibly a distinct force may be formed; but

until this is done it would be well to allow 10 per cent. of men who enlist for the Line to be taken at, or over, 5 feet 2 inches, and let these men, if possible, be made into mounted infantry.

In the French Army the minimum height is 4 feet 11 inches, and it is possible it may be still further reduced, so if our minimum is made at 5 feet 2 inches or even 5 feet we shall still be a considerable way off our neighbours, and small men are better for mounted infantry work; it is also very doubtful if height at any time is a test of physical endurance. Many of the Colonials fighting for us in South Africa, I understand, were scarcely 5 feet high—and how well they have done! It is also well known that one, if not two, of our most distinguished generals would have been rejected when joining the Army had the present rules as to height and physique been in force.

I have had to refuse a large number of men because they were not the requisite height and weight, and have prevailed on many of them to join the Militia in the hope that they would grow to the necessary standard.

Free Discharges.—Recently a class of free discharge has been embodied in the Regulations, by which men are allowed to return to civil life if their parent or parents are destitute, and the soldier has any decided prospects of suitable employment. This class of discharge has increased largely of late, and causes considerable expense to the public. There is really no reason why the man should be discharged outright, and I do not see why in such cases his services should be totally lost to the State. If a man can really become the bread-winner for his mother or father, or assist them—and this is the case which usually occurs—there is no reason, if he is permitted to return to them, why he should not consent to join, if he is fully trained, the Reserve, or, if untrained, his local Militia battalion. He can easily arrange in the latter case to do his twenty-seven days' annual training; and I would, therefore, suggest that the paragraph in the King's Regulations should be altered accordingly. Instead of giving the man a free discharge, after the State has been put to much expense to clothe, feed, and train him, he should be transferred to the Reserve or Militia for the remainder of his engagement, where he will be available should his services be required in times of national danger or emergency.

Sentry-Go.—There is one class of duty which the soldier has to perform, viz., sentry-go, which really teaches the men very little, and which has anything but a good effect on recruiting. I have always endeavoured to reduce this class of work as much as possible, and I consider that some of it, and that the most severe part, might be considerably lessened. It is especially at night-time that this duty presses hardly on the men, and there is no reason which I am aware of why all barrack gates should not be locked from midnight to reveille, and only opened to those who have leave and privilege to return between those hours. It is quite unnecessary to have sentries on cold nights walking up and down between these hours. All gates can

easily be made to connect with the guard-room by a bell, and the sentry, instead of being outside in cold weather, could well be permitted to sit in a chair at the fire. He could then be available to call the non-commissioned officer and let the gate be opened. I invariably gave my men who had permanent passes, or who were granted leave to be out till midnight, to understand that they must return punctually. I did this not with a view of saving the sentry, as it could not lessen his work, but in order that the other men in the barrack-rooms who were fast asleep should not be disturbed by men coming in to go to bed between midnight and reveille. I do not see, however, why between the times named the sentry should not be taken off the barrack gate. He learns nothing at such a time, and he can perform his duties just as well in the guard-room, and it is immaterial if he falls asleep in the chair at the fire. All he has to do is to call "Gate" if anyone asks to be admitted. It is difficult to see why he could not perform this duty just as well from inside the guard-room. There are, possibly, many places where this could not be done where sentries are in charge of magazines or other important buildings or Government property. In most barracks, however, my suggestion could be carried out, and a patrol going out occasionally would be a sufficient guarantee against any irregularities occurring.

Punishments—Bad Characters.—A paper such as this would not be complete without some reference to punishments, and how to get rid of bad characters.

First, as regards punishments. In the lecture to which I have referred, given ten years ago, I then suggested that the men should be fined in lieu of being made defaulters. I have not changed my opinion, and now would be an excellent time to bring in such a regulation. In the Royal Engineers, Army Service, and Departmental Corps, when a man is awarded confinement to barracks he forfeits his working pay in accordance with his rating. In the other branches of the Army a similar rule might well be made to apply, and let each man forfeit his messing allowance for each day's C.B. awarded to him. If this is done, crime in the Army would be gradually reduced to almost vanishing point, and I think one or two military prisons in a short time could be shut up—of course, the usual power of appeal, if it is considered necessary, can be given as in all punishments where a man's pay is affected.

Regarding the discharges of bad characters, it is a most difficult subject to deal with. The number of men tried by court-martial under Section 32 Army Act, re-enlisting after discharge with disgrace, is very large. They are sent away from one corps, but they soon turn up in another, as there are really no means of preventing them re-enlisting. Sometimes in their new corps they go on well for a time—they are usually well known, but cannot be detected; and their case is usually one of *in vino veritas*; in their cups they let out who they are, and then the usual court-martial follows; they go to prison and are again discharged.

Here is an example of one of these men:—

He was first, as far as was known, in the Leicestershire Regiment, from which he was discharged on conviction of felony. He then went on to the

Worcestershire Regiment, from which he was discharged with ignominy; he then joined the Lincolnshire Regiment, from which he was discharged with ignominy; he then honoured His Majesty's Navy with his presence for about eighteen months, from which he was discharged as a fraudulent entry; lastly, he was accepted and enlisted for the Scottish Rifles. Probably this man has been in many other regiments, but these are the only ones which came to light. There are two gaps of nearly three years and over four years in his career, so it is very likely that during these seven years he was living somewhere in several other corps at his country's expense. A system of vaccinating all officers and men in the Army in some particular manner, or of photographing such men as I have described before they leave prison, and then sending copies to each regimental district and recruiting officer, would greatly assist in stopping these re-enlistments.

(Since this paragraph was printed, a distinguished general officer has suggested to me that the anthropometric system which is so well worked in India for the detection of evil-doers, might be tried with these cases; another officer has pointed out to me that the Bourdillon system, so successfully carried out in France, might be made use of. Both systems are, I understand, well known to all anthropologists.)

This class of man causes an enormous expense to the State; but approving officers would, I think, discover more of them when they are re-enlisting if in all suspicious cases they would ask them in quick succession a few questions regarding their antecedents. These men generally fail in their geography because, of course, they are not telling the truth, and they never can or will identify themselves. I caught one man because he informed me he had walked from Fleetwood into Lancashire—as a matter of fact he had not been near Fleetwood. Another said he had walked from Dublin to Armagh trying to get work, but in cross-questioning him it turned out he had been *via* Belfast. When bowled out they then often confess, and a large shedding, not of tears, but of ink results, as a correspondence has to be opened with all their previous corps to get particulars regarding them. In this way I had the satisfaction in one year of having prevented eleven of these men joining the Royal Irish Fusiliers. I fear our system is a little at fault; officers who have anything to do with the recruiting for the Army are judged more by the numbers they enlist than the quality, and it does not seem to matter whether these men turn out to be frauds, as they are called in the Army. These frauds, however, are a great expense to the country, and a perfect curse to their corps, the commanding officer, adjutant, orderly-room clerk, and everyone concerned, and they deter many respectable fellows from making the King's Army a calling. While the eleven men above referred to were of necessity confined in the guard-room at Armagh, I gave orders that no recruit was to be made a prisoner unless he committed some very serious offence, to prevent their being contaminated by these men. These are some of the difficulties a commanding officer has to contend with.

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(Since this paragraph was printed, a distinguished general officer has suggested to me that the anthropometric system which is so well worked in India for the detection of evil-doers, might be tried with these cases; another officer has pointed out to me that the Bourdillon system, so successfully carried out in France, might be made use of. Both systems are, I understand, well known to all anthropologists.)

This class of man causes an enormous expense to the State; but approving officers would, I think, discover more of them when they are re-enlisting if in all suspicious cases they would ask them in quick succession a few questions regarding their antecedents. These men generally fail in their geography because, of course, they are not telling the truth, and they never can or will identify themselves. I caught one man because he informed me he had walked from Fleetwood into Lancashire—as a matter of fact he had not been near Fleetwood. Another said he had walked from Dublin to Armagh trying to get work, but in cross-questioning him it turned out he had been *via* Belfast. When bowled out they then often confess, and a large shedding, not of tears, but of ink results, as a correspondence has to be opened with all their previous corps to get particulars regarding them. In this way I had the satisfaction in one year of having prevented eleven of these men joining the Royal Irish Fusiliers. I fear our system is a little at fault; officers who have anything to do with the recruiting for the Army are judged more by the numbers they enlist than the quality, and it does not seem to matter whether these men turn out to be frauds, as they are called in the Army. These frauds, however, are a great expense to the country, and a perfect curse to their corps, the commanding officer, adjutant, orderly-room clerk, and everyone concerned, and they deter many respectable fellows from making the King's Army a calling. While the eleven men above referred to were of necessity confined in the guard-room at Armagh, I gave orders that no recruit was to be made a prisoner unless he committed some very serious offence, to prevent their being contaminated by these men. These are some of the difficulties a commanding officer has to contend with.

Good-Conduct Pay.—If, then, the men on enlistment are given a clear shilling a day, some few may ask, What is to be done for the steady soldier who extends his service or re-engages? At present good-conduct badges are given, the first after two years, the second after six years, the third after twelve years, and the fourth after eighteen years' service. These periods would have to be shortened to two years, five years, eight years, and eleven years. After the latter period I would suggest no further badges being given, as otherwise it will be found that a large number of men will extend their service to 21 years with the colours, and if men do extend their service the pension they will become entitled to is a sufficient reward; all we require in a battalion is a leaven of old soldiers, it would never do to go back to the old system when all men stayed on for 21 years. They were good soldiers and excellent fellows during peace, but I fear in war-time they would not be able to undergo the hardships of a campaign. We require a certain number of seasoned soldiers—a little of the long-service element—in every battalion, so that in time of war the Reservemen required to make it up to war strength should not exceed about one-third; if about 600 men in each battalion of varying ages from about 20 upwards are fit for active service, there will be nothing to fear; there would then be no risk at a critical moment of discipline suffering. It must be recollected that in war it is the greatest kindness to bring it to a speedy conclusion, and the way to do this is, having arranged for the wants of the Navy, to ensure our also having an efficient Army.

I may here perhaps mention that there were other points I had intended to refer to, but fearing my paper would be too long, and that I should exceed the limits of time, I struck them out. They were:—

1. The clothing of the Militia, the regulations concerning which are liberal.
2. The wear and tear of clothing at manœuvres.
3. The free issue of some articles of kit periodically.
4. Barrack damages, which are no grievance, as nothing but wilful damage is charged for.
5. Passes.
6. Dining halls—a necessity.
7. Cubicles—a doubtful improvement requiring much consideration, and which if carried out throughout the whole Empire would cost from £6,000,000 to £8,000,000; whereas a slight increase of floor space to each man would be greatly appreciated and would entail little extra expense.
8. A small room in each barracks, neatly furnished out of regimental funds, where the men could speak with their relations and friends when they come to see them; at present there is no suitable place in any barracks.

Ours is now a great Empire. The red patches on the map go on increasing, and it is well worth taking the trouble to maintain what

is under our flag; and in order to ensure our possessions being kept in a state of peace and security, an efficient and sufficiently large Navy and Army are essential. To-day I have endeavoured to put before you some points in connection with our officers and men of the Army, the result of ten years' experience as a commanding officer, by which, perhaps, our voluntary system of procuring the *personnel* for the military forces of the Crown may be improved. Their adoption will cause a small increase to the Army Estimates, but by the abolition of the conditions and stoppages, etc., to which I have referred, we shall have contented soldiers. The small increase suggested regarding the officers, if adopted, must have a good result; and if we can procure sufficient officers and men, that bugbear of conscription, or any form of compulsory service, to safeguard our Empire, will be relegated to the distant future. The purse-strings must be relaxed. Mistaken economy only costs far more in the end. We rightly endeavour to decrease our National Debt, but other nations have had to increase theirs to bring their Armies up to the standard of modern requirements. We must for a time suspend the reducing of our debt to do what is necessary for the safety of the King's Empire. The anxiety which thinking men had to go through fifteen months ago, when Lord Rosebery told us he supposed we should "muddle through as usual," must not be repeated; and thus, if any scheme can be devised by which the *personnel* of our Army can be maintained, its organisation, equipment, training, direction, and being in a state of readiness, are not a task of such colossal magnitude as is imagined.

May I thank you, in conclusion, for the great kindness with which you have listened to me.

Colonel J. A. FERGUSON (late Rifle Brigade):—We have not often, I think, in this theatre listened to a more practical lecture. Those of us who have followed Colonel Dooner's lecture to-day will, I am sure, be very glad to come here again to hear him on the subjects which he has been unable to touch upon in this lecture. We of the Services meet here and talk over our own affairs in what may be almost called strict privacy, because, although the Press are represented here, the pearls of wisdom which fall from our lips are seldom preserved! Therefore one sometimes gets an opportunity of saying what one must not say through the Press. We officers are not allowed to ventilate our opinions through the Press on matters under discussion. One would scorn to do it anonymously, and one may not do so under one's name; but we are not yet forbidden to say in this theatre what we think is the truth. I agree generally with nearly everything which has fallen from the lecturer. I have only, therefore, noted a few points on which I venture to differ from him. If the lecture had been written to-day instead of some time ago, of course Colonel Dooner would have left out some things which he has read to us to-day, but the lecture had to be in print before this week, and therefore the lecturer had not had the advantage of reading Mr. Brodrick's speech in the House of Commons the other night. Of course, we are all aware now that the 3d. a day messing allowance is to be given to everybody in future, and every soldier in the room must be glad that the recruit on joining will now get the messing allowance at once.

Colonel DOONER:—That is the very thing.

Colonel FERGUSON:—That appeared in the *Times* summary of Mr. Brodrick's speech.

Colonel DOONER:—I hope you are right.

Colonel FERGUSON :—I hope I am right. We want to attract recruits, and men want to know what they are going to get at once. It is the hungry boy who wants the extra 3d., and not the old seasoned soldier. The seasoned soldier takes the extra money out in beer, but the young soldier wants plenty to eat, and he wants the extra 3d. more than anybody else. It seems such a pity to limit the 3d. to those whom the commanding officer and the medical officer say are 19 years of age and efficient soldiers. I thoroughly agree with the lecturer that the conditions of enlisting should be made more elastic. It is a good thing that they have been made more elastic in recent years. Sometimes one is tempted to say that two years would be a sufficient term to fix for efficiency. If a man is not an efficient soldier at the end of two years he must have a singularly inefficient commanding officer, and a very bad adjutant. The lecturer, we will all agree, is right in saying that the Army is ludicrously small. A book which we do not read as much as we ought, I am afraid, and which one must not mention here, says that "A strong man armed keepeth his palace, and his goods are in safety": but the strong man who is not armed risks his palace, and his goods are in jeopardy. It is a sacred duty for all of us who know what we are talking about to repeat again and again in this theatre, and whenever we get a chance, that the Army is perilously small for the needs of our great Empire. Talk about an Island Power! We are a Continental Power, and not only a Continental Power, but a Power whose dominions extend to five continents. It is a thousand pities that in the last few years, with perhaps the strongest Foreign Minister the country has ever seen, we have paralysed the hands of that Minister by not giving him sufficient men—we as a nation, I mean. He has been obliged to feel that he cannot speak as he ought to do, as the Prime Minister of this great Empire ought to be able to speak, because he has not enough efficient battalions at his back. We cannot be considered to be in a satisfactory condition compared with France. We have a population of 41,000,000, and France has a population of 39,000,000, and yet France trains fifty times as many men as we do. The lecturer despairs of compulsory service in any shape or form. I think that the person who talks about conscription for this country would be roughly handled, but I do believe that the Government would do well frankly to recognise the fact that every able-bodied man must accept service in the Militia. Four trainings is what was laid down in Pitt's Act at the beginning of the century. It would not be an onerous condition to lay that down again, that every man should be compelled to do this service in the Militia, so as to be qualified to bear arms in his country's defence.¹ The lecturer puts our fighting men at 900,000, but it must be remembered that those numbers include Volunteers, who cannot be said to be trained soldiers in many cases; although many of the Volunteers are extremely efficient, many are not. The lecturer, again, puts the extra force that we shall require for some years to come in South Africa at 5,000 men.

Colonel DOONER :—I said 5,000 in addition to the former number.

Colonel FERGUSON :—I think even that is a very sanguine estimate. I am afraid that for a year or two we shall require a very much larger force than 5,000 men more than before. In the masterly statement of Mr. Brodrick the other night, which I am sure most of us soldiers followed with great satisfaction, there were two great blots which bear on the subject of the lecture. One is the maintenance of the army corps, which I think is a foreign will-o'-the-wisp, and the other was where Mr. Brodrick said that he proposed to replace certain British regiments in Colonial coaling-stations with native troops. Having served for five years in Colombo, I think it would be hazardous to entrust such an important place as that to native troops. If it is considered necessary to have one European soldier in India to every two natives, none of our coaling-stations ought to be left without a good backing of British troops. The lecturer has touched upon the compulsory retirement of officers. It does seem very wasteful that officers in the prime of life, with ripe experience, have to retire under a hard-and-fast age rule. The Germans laugh at us for it. I remember going over the

¹ This would solve the recruiting difficulty, as it is reasonable to expect that many men would pass from the Militia into the Army.—J. A. F.

fortifications at Metz when I was at the Staff College with Colonel Lonsdale Hale, and General von Smyth, a Cockney by birth, who had been Quartermaster-General to Prince Frederick Charles, said that the Germans laughed at us for our hard-and-fast age rule. Surely the doctors might be consulted, and if a man is still active, and perhaps can run a mile in six minutes, it seems a little hard to turn him out at a fixed age, because some people are worn out at 48 or 57, as the case may be. It is extremely extravagant, because we lose some of our best men while they are still thoroughly fit. As regards the training of officers, the lecturer is quite right in saying that we should do well to preserve both the Sandhurst system and the Militia system, but I do trust the authorities in their wisdom will modify the present rules for the admission of officers through the Militia into the Army. It does seem a great mistake that the school education should be mixed up with the professional subjects, and that the two most important professional subjects for every day duty—military law and tactics—have been cut out. The new Regulations are the despair of Public Schools and the ruin of the Army tutor. One suggestion I should humbly like to make, and it is really on an important subject. The regiments in India just now require some 25,000 or 30,000 men to bring the reliefs up to date. One does not see how the recruits are to be found for these new army corps, or whatever you may call them. Would it not be well to adopt the suggestion of Archdeacon Wilson, of Manchester, made some fifteen months ago through the columns of the *Times*, and form military schools in different parts of the country where the embryo Hooligans or larrikins, call them what you will, the high-spirited lads who are so much trouble at present in civil life, might, by being caught young, say at the age of 14 or so, be trained as soldiers? They are very valuable material. We man the Navy with lads taken from naval schools, or trained on hulks. Why should not we man the Army by means of military schools? I think that every County Council and every great city should have a military school for the sort of lad I am describing. The lecturer speaks of getting more Militia officers, but is it possible to get many more? I doubt it very much. I heartily congratulate the lecturer on the most interesting and valuable lecture he has given us.¹

Colonel E. L. BENCE-LAMBERT (Commanding 3rd Connaught Rangers) :—In one paragraph of his paper Colonel Dooner refers to the question of regiments being called out at a time to suit themselves. I hold, with, I think, a number of other people, that the thing is to train these men so that you will have them in war-time. I am in command of a West Ireland Militia, and we are dwindling in numbers. In my opinion, this is greatly due to the fact that we have not a sufficient number of men to recruit from. I have spoken to Colonel Dooner on the subject, and I think for curiosity it would be rather interesting to show how in the counties from which my Militia comes I am at the present moment recruiting from 2,000 men, and I hold that you cannot possibly keep a regiment properly if you only have 2,000 men to recruit from. If we were called out either early in the spring or late in the autumn, in all probability we should be able to touch a number of men which we do not touch at present. The Midland Great Western Railway of Ireland have given me these statistics with regard to what occurred the year before last. They issued what we call harvestmen's tickets, that is to say, men who come over to England to labour in the fields, but it does not really matter in what time of the year they go. In February of the year before last they issued 1,111 tickets, in March 2,514, in April 4,166, in May 1,295, in June 9,145, and in July 137, making a total of nearly 19,000. The majority of these are able-bodied men. Besides those, there are from 3,000 to 4,000 men who go from Sligo, Ballina, and Westport by ship to Scotland and England. Taking the German standard, where there is

¹ Had time permitted I should have liked to urge that the country would do well to replace the soldier's kit when unserviceable through fair wear and tear. Also that a handsome increase of pay should be given to men who "extend" their service; and that non-commissioned officers who re-engage with their commanding officers' approval should have their pay doubled after 12 years' service. In civil life employers know how to retain valuable servants.—J. A. F.

compulsory service, and applying it for argument's sake to Mayo, it works out that about 1 in 10 of the population would be eligible for service. County Mayo therefore with a male population of 260,000, would have 26,000 able-bodied men to deal with. Of that number I have shown you that something like 19,000 of those men go over to England each year, where they net from £10 to £12. Unless you can call those men out when work is slack, you will not get them. We do not touch them. We only get odd-job men, and it leaves altogether just 4,000 men, from whom you have to deduct gentlemen and lawyers, which only leaves about 2,000 men from whom you can recruit. If we were called out at that time of the year which suits these labourers when other work was slack, I have no doubt whatever that the regiment to which I belong could be brought up to 800 men again. We ought, if possible, to try to suit the time. Of course, we shall be met with the question as to barrack accommodation, but that I have nothing to do with. The lecture has been most interesting to Militiamen, and I am very much obliged to Colonel Dooner for it.

Lieut.-Colonel F. HAMMERSLEY, *p.s.c.* (Commanding 4th Lancashire Fusiliers):—The question is not only one of providing recruits for the Army, but also of keeping them. The lecturer has pointed out that the recruit should be made content, so that when he goes home he may bring back others. A great deal of his contentment depends on the good organisation of the battalion to which he belongs. A comfortable regiment is always a strict regiment. That brings me to the question of non-commissioned officers. Without a proper proportion of non-commissioned officers it is practically not possible to keep up that supervision and discipline which are necessary to make a comfortable battalion. At the present day non-commissioned officers are taken away from their regiments for every sort of thing. I do not say that the duties they fulfil are not useful, but still those men are lost to their battalions. Recruiting officers want clerks. They send to a battalion for a clerk. Clerks are difficult to get, and, as a rule, the only men who have the necessary qualification for clerkships are the non-commissioned officers, who are taken away from their battalions for that duty. The garrison police requires a sergeant; a battalion has to find one. The duty which he has to perform in his battalion is to command a section, but he is taken away to do duty in the garrison police. His place has to be taken by somebody else, probably by a lance-corporal who knows little or nothing about the duties of this important post—how important it is the war has taught us. The result is want of supervision, and that leads to crime. So far as the regulations on the subject are concerned, I think the organisation laid down in the King's Regulations could not be better, but with the shortage of non-commissioned officers in battalions it is practically impossible to carry out those regulations. The result is discontent amongst the men and a very large wastage amongst recruits. A man who leaves the regiment through being discontented, finding he cannot get on, keeps other recruits away. Not only are numbers of non-commissioned officers taken away from their regiments for garrison duties, but many are necessarily employed on regimental duties—I refer to such men as the officers' mess sergeant, the sergeants' mess caterer, the post sergeant, etc. All these men have definite duties to perform in their companies, but they are taken away and other junior non-commissioned officers have to perform their duties as well as their own, resulting in those duties being rushed through and only half done. Of course, a large number have to be employed in addition, especially at home, in training recruits. A great deal has been said lately on the question of captains training their companies. They are said to be wanting in professional spirit, and that they do not know their work. That is not my experience. I have the honour of commanding a new battalion. It only started last March, and it is now over 1,000 strong. My captains would be only too delighted to have the entire training of their companies if they could get them. But they do not get them. It is only twice a year, during field training and musketry, that they ever see their companies. It was only yesterday that I was talking to a captain of mine, an able officer in every way, who has only recently returned from South Africa, full of zeal; he told me that it was heart-breaking the difficulty he had in getting hold of his men. I think that many of these duties might be performed by

Reservemen.¹ In the cavalry there is a system of reserve squadrons into which all these non-commissioned officers and men are put; the service squadrons when they appear on parade are complete, and are really trained under their own squadron officers. I cannot admit for a moment that a company officer is not perfectly capable of training his own command if he gets it. We have already seen what they can do. Take, for instance, the case of the Nile Expedition. Company officers were started off in boats with their companies, many of the men having never handled an oar before in their lives, but they got through all right. We saw what company officers could do in the Egyptian Army. Anybody who has seen the Egyptian troops knows that they are a very fine body of men and exceedingly well trained. That training is entirely done by officers holding the rank of company or squadron commanders in the British Army. We give an officer a company of mounted infantry. He possibly knows something about riding, and he may have been through a course himself; in the space of three months he turns out a body of men perfectly trained in a subject of which they had no previous knowledge. Colonel Lambert spoke of a battalion being ready to take its place in war, but according to our present system it never is ready, because until it actually comes to war many fighting non-commissioned officers and men are all over the place, doing anything but learn their trade as fighting men; how can they be expected to be efficient?

Colonel HANS HAMILTON (Northumberland Artillery):—We are all very much indebted to the lecturer for the most interesting paper that he has laid before us. I am quite sure what is greatly exercising the minds of the people of this country at the present moment is, how Mr. Brodrick's scheme for the increase of our Army and Militia (which he so ably laid before the House of Commons the other night) is to be carried out, without, what is dreaded by the lecturer, and dreaded also by a great many people in this country, namely, conscription. This is one of the most important subjects which has been brought before this meeting this afternoon. Reading between the lines of Mr. Brodrick's speech, in large letters is to be seen the word "conscription." How is the Secretary of State for War to get the men he proposes should be added to our Services? Will he be able to secure them with the offer of extra pay, or will he not? Anyone who suggests a practical scheme by which to avoid conscription, or to avoid what is a very modified form of conscription—I mean the ballot for the Militia—will render a great service to his country. I have submitted a humble proposal to the Lord Lieutenant for the County of Northumberland, which, I believe, in the course of a few years, would save this country from conscription, and provide many thousands of men skilled in the use of the rifle. The idea occurred to me this way: I happen to live in a parish near London, and through the kindness of a friend I was allowed to see a copy of the records of a Court Leet held in the parish early in the sixteenth century. The record of what took place at this Court was as follows:—"At a Court Leet, held in the parish of ———, it is this day ordered that the constable in each township shall see that every boy (in accordance with the Acts of Parliament therein provided) who has reached the age of twelve years shall be supplied with a bow and arrows, and shall attend at the butts." I ascertained that between the reigns of Henry III. and Queen Elizabeth no less a number than eighteen Acts of Parliament were passed, having for their object the teaching of the science of archery. We know that in the earlier times of Edward I. the use of the bow was encouraged in every possible way. My proposal is (seeing we have free education in every Voluntary and Board School throughout this country) that every boy who reaches the age of twelve years should be taught, not to fire, but to point a rifle from different positions. The

¹ My point is that the administrative branches of the Army are intended, as I understand it, to minister to the wants of the fighting units, and should have an establishment adequate to that duty. They should not be allowed to call upon fighting units to make up their deficiencies, thereby dangerously affecting the efficiency of the very units they are intended to help.—F. H.

experience of the last eighteen months during the war in South Africa ought to be a lesson to us. If the handling of a rifle had been taught to the boys in our schools during the past fifteen years we should have had at the present time tens of thousands of young men skilled in its use. The boys ought also to be taught, where it is possible, to ride. After many years' experience and the study of our national requirements, I maintain it will be serious neglect on the part of the members of the Government to which our Hon. Chairman belongs, if they do not forthwith arrange that the military and educational departments of the State combine to carry out this all-important safeguard for the defence of our country and its dependencies, and thus prevent conscription or ballot for the Militia in the near future. I need not remind ladies and gentlemen present what was the result in centuries gone by of boys being accustomed to the use of a bow and arrows at the early age of twelve years. History tells us that the British archer distinguished himself in every battle we fought, so I say that the British rifleman would gain the day for us in modern times if taught this science in our schools. We have gathered much experience during the present war with regard to the reckless firing by our troops and the enormous and unnecessary expenditure of cartridges. This was very aptly illustrated the other day by an Irishman—I suppose his name was "Pat" Atkins, not "Tommy" Atkins. He came home to his village in Ireland, having been in many engagements, fortunately without hurt. After talking over his battles, a gentleman said to him, "Well, Pat, what 'struck' you must in all the battles you've been in?" "Well, your honour, to tell the truth, what 'struck' me most was the number of bullets that 'missed' me!" There would be a less number of bullets miss and a much less expenditure of ammunition if we would only teach boys at an early age the science of being able to point a rifle properly. I commend that suggestion to the meeting, and I trust the present Government will not delay many weeks longer without initiating this simple addition to the education of our youths. I am very glad that we are fortunate enough to have a member of the Government present (Lord Raglan), who takes the deepest interest in the welfare of our Army and Reserve forces, and, perhaps, he will use his influence to ventilate the proposal which I have endeavoured to place before this meeting. Another matter, which is also a very serious question for the taxpayers of this country, was referred to by the lecturer, namely: Are we prepared from a military point of view to receive an invader? I submit we are absolutely unprepared. What can be a greater invitation to any of our neighbours in Europe to invade us than the state of unpreparedness, from a military point of view, of our coast defence? We possess at the present time few, if any, proper modern guns of position and no mobile modern guns, and therefore our generals can provide no adequate scheme of defence. I regret to say the reason why we have no modern guns is the neglect on the part of the previous Government—and, indeed, of all Governments in the past. The guns are being manufactured now, I understand, but I am advised that it will take six or seven years to supply this country with proper and sufficient mobile modern guns to repel an invasion by a Continental Power. We, as taxpayers, are entitled to look to our Government to secure this country and our homes from being raided. We want reasonable safety. Have we got it? I say, absolutely, "No." I do not blame the military authorities, because I have no doubt our generals have made out such schemes as are possible, without the necessary modern mobile guns. We know from General Mercier that a very near neighbour made every preparation last year to land troops in this country. The fact that we are unprepared is an open invitation to an unfriendly Power to land troops in this country. If we were properly prepared no foreign Power would ever dream of making raids upon our coasts. There are three important and pressing matters which I trust will be dealt with at an early date by Parliament and by the Commander-in-Chief. First, what I have already referred to, namely, the teaching of every school boy who has reached the age of twelve years the way to point a rifle from different positions, and thus prevent conscription in the future. Secondly, the supply of mobile modern heavy Q.F. guns, and mobile light Q.F. guns, to arm and properly organise a mobile coast force for the defence of the south coast of England, and thus

assist in securing the mobility of our fleets. Thirdly, the storing and maintenance of sufficient food stuffs in this country for, say, eighteen to twenty-four months ahead, to prevent panic and starvation in time of war, and again further secure the mobility of our fleets. I shall be surprised if my first and my third proposals are not discussed in the House of Commons at an early date. My second proposal I feel sure is receiving, and will receive, the earnest consideration of our new commander-in-chief, Lord Roberts, and will be carried out. There are other points which I should have wished to have touched upon, but, as my allotted time has gone, and no doubt there are other officers who wish to address the meeting, I will only thank you for listening to the few remarks I have made, and I would again testify to the usefulness of the paper the lecturer has read to us.

Lieut.-Colonel W. C. E. SERJEANT (5th Battalion Rifle Brigade):—I only propose to say a few words upon Colonel Dooner's very able paper, which has probably more thoroughly grasped the question than has any other paper that has ever been read before this Institution. The lecture is more or less connected with the Service to which I have the honour to belong, viz., the Militia. The Militia depends mainly for its recruits on the boy who cannot get work and on the old soldier who cannot get employment: as far as the boy is concerned he may be all right in his way, but his position in the Militia has not been made as pleasant for him as it might have been. There is possibly a reason why the authorities have not hitherto thought it advisable to extend every consideration to the Militia, for the boy in question is practically compelled to join the Regular Army in order to obtain a more pleasant sphere wherein to utilise his military proclivities. With regard to the officers, I think you will never have any difficulty in getting them. The system of selection which has been exercised during the war in South Africa may possibly tell somewhat on the future supply of Militia officers. Some officers may say, "We belong to a unit which, as a battalion, has taken great interest in practical soldiering, and, at increased expense, we have frequently attended the manoeuvres. We have been well reported upon as Militiamen: we act as Regulars in time of war, and we think, therefore, it is only reasonable that we should have been selected for the particular post of honour, viz., active service, while other battalions who possibly have not done as well as we have, and who have not attended the manoeuvres as we have, have been selected in preference to ourselves." That is only a reasonable position to take up under the circumstances. But no doubt with our new organisation and administration at the War Office all these details will be set right. Broadly speaking, I contend that the question of obtaining officers and men for the King's Army is one of £ s. d. If you want a good man in any walk of life you have to pay for him. If you want a soldier who is a man of intelligence, a man who possesses potentiality, and is capable of receiving any technical knowledge an instructor may wish to pour into his brain, you must pay him according to the capacity of his intellect. The same remark applies to officers. One of the speakers dropped a hint about the Bar. I have known something about it, as I have also about the Auxiliary forces for nearly a quarter of a century, and I can say that in no profession can a man do better than at the Bar if he knows his work. Why? Because he gets a chance. It is the same with the soldier. If you procure a capable man, a soldier capable of receiving instruction, all his instructors have to do is, as Colonel Hammersley pointed out, to apply a certain amount of time in a reasonable way, and excellent results should be obtained. That is what you pay for, and what you must pay for. With regard to ways and means, one speaker spoke of increasing the rates in respect of technical and military education.

Colonel HAMILTON:—I only wished to strengthen the gentleman's argument that boys educated at the expense of the country could fairly be asked for some return in the shape of drill.

Lieut.-Colonel SERJEANT:—Quite so, Sir; but I was going to mention that all the necessary funds can be obtained for increasing the military efficiency and the forces of the country without in any way drawing upon the rates or even upon the taxes. That

is a tall statement, I know, but it is a fact. Anyone who is engaged in large commercial transactions, or who is conversant with the methods adopted in the handling of millions, not only in this country but elsewhere, will tell you that the greatness of the commercial prosperity of England depends upon the magnitude of her national debt. Consequently the more you increase the national debt within practical limits, the greater will be your international credit and the more powerful your financial administration. That is an absolute truth. If you double the pay of your soldiers and considerably increase your Army, you will then have an effective commercial asset. Quadruple the pay of your officers if you like. It does not matter what you pay them in reason, because you can afford it. In industrial and in other branches of finance there are men in our midst to-day who are making millions and millions, whom taxation cannot adequately touch. These are the men who do in reality manipulate your commercial assets for their own purposes, and these, I contend, are the men who should adequately pay for the support and maintenance of our military forces.

Captain R. J. MACDONNELL (late 81st Regt.) :—I think the question of providing men, especially for the Army, is one of the most important that could possibly take place at the present time. The lecture is most able and practical, and, I hope I may be allowed to say, most acceptable at the present moment. It seems to be acknowledged by Colonel Dooner that the word "conscription" will never be entertained by the people of this country, that they will never recognise conscription. Of course, the way in which the people in this country would recognise conscription would be through the action of the House of Commons, and the Government of the day, when it becomes a question at an election. At election-time the question, should it be raised, will be fought out at one election. The question has been asked : How is conscription to be avoided ? I am going to fall in with Colonel Hamilton's view. It can be avoided by going to the root of the thing, by educating the youths of the country. If military instruction had been rendered obligatory when national education was established, this question would not have arisen, because all "youths" would, in the same way as they receive ordinary education, receive a certain amount of military instruction which would qualify them for taking their place in the defensive forces of the country. This is not a new fad of mine. Eleven years ago, when Lord Wolseley was Adjutant-General, I put the whole matter before him. He was very sympathetic with regard to the question of the training of youths. I had the honour of an interview with him, and he said, "Can't you get somebody to take it up ?" I never have been able to get anyone to take it up, and I do not know that it has been taken up. There is the *Lads' League*, the *Lads' Drill Association*—and a very useful Association it is. I hold the view very strongly that every male, between the age of 14 and 17, as he grows up ought to be prepared by the nation and free of charge to take his place if called on in the defence of the country. Passing from that, I come to the question of what is to be done. At a School Board election in the district in which I reside, I wanted to get the gentlemen whom we returned, to pledge themselves and the Board Schools to take this question up *as a matter of education*. No one can contradict me when I say that if you teach boys when they are young the rudiments of soldiering, the rudiments of aiming and learning how to fire—I will not go so far as to say firing—as years roll by it becomes engrained in them and they will wish to know something more about it. If this were done, you would have the Volunteer force increased three-fold. But whether you had the Volunteer force increased three-fold or not, every youth, when he grew to manhood, would have a certificate of some sort that he had received a certain amount of military education. I do not know what kind of certificate it should be ; I leave that to those gentlemen of light and leading who become Cabinet Ministers, those who look after our interests. It is for them to devise the means by which these ideas are to be carried out. It certainly seems to me—and I say it here amongst men of influence, who I hope will exercise influence outside on public opinion—that the time has arrived when every young man should be called upon to take his place in the defence of his country, and a system of "Obligatory Military Instruction in all Schools for Males" should be passed into Law ; and which might well be coupled with the course of physical training which is at present given in Board Schools.

Colonel DOONER, in reply, said :—I do not know that there is any point which I have to answer in connection with the lecture. None of the speakers, I think, have disagreed with any statements I have made. I certainly do hold to what I said about conscription, that it has not, in my opinion, yet come within the range of practical politics, because, as I say in my paper, as far as I know, no member of Parliament or candidate for Parliament has yet referred in his address to such a subject. Therefore the point is in the future, and, as the last speaker observed, would have to be fought out at the polls. Of course mine is only an opinion, but in my view the candidates who say they will vote for conscription or any form of compulsory service will cut rather a sorry position at the declaration of the poll. I think no form of compulsion should be adopted until we have given the voluntary system what I call a fair chance. It never has had really a fair trial. ("Never.") I am old enough to remember when a man only drew 4d. or 5d. a day; then it went on to 6d. and 7d. Then we paid the men weekly, and it got to about 4s. 6d. or something like that; but what I submit it should be, is: a clear shilling a day on enlistment. I am surprised, and at the same time delighted, to hear Colonel Fergusson say that every man who enlists is in future to get his clear 1s. a day, but I will ask Colonel Fergusson to believe it when he sees it. I read every word of Mr. Brodrick's speech of last Friday in the House of Commons, but I certainly did not see anything in it which said that he intended giving all men on enlistment 1s. a day. He did not mention anything about abolishing the age or the efficiency condition, and that is what Colonel Fergusson, I think, has failed to observe. I hope he is right and that I am wrong, Colonel Bence-Lambert said that 19,000 men come over from County Mayo each year, thereby lessening the chances of recruiting for his battalion. As we know, the West of Ireland battalions are in rather an unhappy condition in the matter of their strength being so very much below their establishment. I think the authorities should consider whether it would not be advisable to call the regiments in that part of Ireland out for training sometime in April or earlier, so as to get the training over by at latest the 1st June. That would, I think, give Colonel Bence-Lambert and other commanding officers in the West and North-West of Ireland a better chance of bringing their regiments up to establishment. We all agree that the bounties ought to be increased; and as appears from Mr. Brodrick's speech this will now be done. The bounties to Militiamen will for the future be very fair, and the men will be well deserving of the increase, because they will be ready at a moment's notice to come out and fight if required. The returns of the Reservemen who joined when they were called out proved conclusively that we can rely on the Reserve, and that the men are there when we want them. With regard to what Colonel Hammersley said about the non-commissioned officers being taken from battalions, and captains being unable to get their companies together, the difficulties that commanding officers have to contend with are very great. Officers have an uphill battle with all the duties which have to be carried on, and when their non-commissioned officers are taken away from their legitimate duties, the trouble is still more increased. Of course, down at Chatham we have had considerable difficulties to contend with, because there has not been the usual garrison there to draw upon. I hope, however, that when we have got the full strength Colonel Hammersley's difficulties will not be so great as he has mentioned.

Colonel HAMMERSLEY :—My point is that the regiments ought not to be drawn upon at all; that the regiments of the fighting unit and all the administrative branches should be of sufficient strength without drawing upon the fighting units.

Colonel DOONER :—Of course that is a great point, and everybody will agree with it, but there is certain work which has to be carried on in garrisons, and it is owing to the garrisons themselves that this is so. For instance, Colonel Hammersley has mentioned garrison cells and other duties of that description. Of course the authorities naturally draw upon the regiments to furnish the necessary staff in order to save money. I agree with Colonel Hammersley that it is not a good or an efficient way of managing these matters, but it cannot at present be avoided. Colonel Hans Hamilton asked who is going to propound a scheme to avoid conscription. I say that our voluntary system up to the present has certainly saved us from conscription. All

I want to argue is that we should take care that the men when they are enlisting should get a fair rate of pay ; and I consider if we could only say " Your pay is a clear shilling a day ; do you want to enlist or not ? " we should get sufficient men. I think that is the way we could avoid conscription—to try and get contented soldiers. Let the men then go out amongst their friends, and you will find that they are the best recruiters for the King's Army. I think Colonel Hamilton mentioned something about the Government wishing the regiments not to recruit up to their strength. I fear there must be some mistake, but I imagine the answer is : our organisation being 8 companies in the battalion, although I know there are some battalions which have 10 or more companies, the authorities naturally do not want, if possible, to have battalions differently organised. After all, had Colonel Hamilton been allowed to increase his battalion it would not remedy the difficulty. There might be the numbers, but without any proper organisation.

Colonel HAMILTON :—I submit that would not be so, because the taxpayer is entitled to have the 130,000 men he is ready and willing to pay for, and for which the money has been voted.

Colonel DOONER :—Colonel Hamilton is right when he says that the total is 130,000 men. But the authorities distribute that over all the counties of Great Britain and Ireland, and, unfortunately, if one county fails, as in Galway or Mayo, to recruit its proper number, the authorities cannot well go and add on a company or half a company to another battalion where recruiting may be satisfactory, and at the same time make the organisation—shall I call it—more or less, ridiculous ?

Colonel HAMILTON :—It has been so always. This is not the only instance. I am reminded of other instances where the country has not been properly treated by the Government. You want men. The taxpayers are prepared to pay for these 130,000 men, but they have not been recruited, and where commanding officers were ready and willing to recruit them, they were refused.

Colonel DOONER :—Of course the only way of getting out of the difficulty, if the authorities saw there was a chance of getting the requisite numbers, would be to have two battalions in the particular place where Colonel Hamilton refers to. The point which Colonel Hamilton, I think, misses, is that one company tacked on to a battalion would be no proper organisation. I do not think there is anything more for me to say, but before I sit down may I again thank you all very much for the kindness with which you have listened to me, and express my gratitude to those who have so kindly joined in the discussion.

The CHAIRMAN (Lieut.-Colonel Lord Raglan) :—It is usual, I believe, on these occasions for the Chairman to sum up the discussion ; but as time is getting on I will not detain you, except to refer to certain points where there appears to be some little difference of opinion. Colonel Dooner has given us a most able lecture, but with certain remarks of his I do not agree, and there are certain other points in regard to which I can perhaps show him he has received a wrong impression. With regard to the question of the messing allowance for young soldiers, I would point out that it is hardly fair to give a man who has just joined, and who does not know the butt-end of his rifle from the muzzle, the same pay as you give to a trained soldier. In the boy's own interest it is not advisable that he should have too much money in his pocket. Threepence does not sound very much, but a few pence more or less is apt to mean another pint or two, and that may lead to the Guard Room. We do not give our sons, when they first go to the University, the same allowances that we give them a little later on in life. Coming to the question of the army corps, Colonel Dooner seems to think that because we propose to keep three army corps more or less ready to embark on foreign service, we are going to keep ships perpetually somewhere—I do not know where—to take the men abroad. I believe there is no room in our harbours for all the ships of the Navy, and if we are going to fill up the harbours with a large number of transports I do not know what would occur. Then

there is the question with regard to the pay and allowance to Militia officers for going through classes. Last year very considerable additions were made to the classes and to the schools for attending which Militia officers receive pay and allowances. They can also now be attached to regiments for the purpose of refreshing their knowledge at intervals in a way never allowed before, receiving the pay and allowances of their rank. I hope that system may be still further extended.

Colonel DOONER :—I hope they will be allowed to go to the higher things—to (G). What is laid down in the Regulations as (C) to (G), thereby giving them some encouragement to pass the examination which all captains in the Regulars have to pass.

The CHAIRMAN :—I hope we are moving in that direction. With regard to the question of Militia bounties, of course Colonel Dooner was not aware of them when he wrote his lecture. I believe he approves of them. The system proposed for Militia bounties is that the Militiaman will receive 30s. after each training and a £3 bounty between his second and his third training and after every subsequent training. This will probably be given at intervals in sums of £1. That will be a substantial sum for a man to receive; and you will have the additional advantage of keeping in touch with the men during the non-training period. The fact that you lost sight of your men for 10 or 11 months in the year has always seemed to me the weak spot in the Militia. Colonel Dooner alluded to the employment of discharged soldiers. There is one point with regard to that, viz., the giving of characters to the men, which I would press upon officers present. One's idea is to be kind to a man. But if you give a good character to a bad man and that man obtains a position of trust by that good character, which he is not worthy of, and fails in that position of trust, you do a most incalculable harm to the soldiers in the Army who have a good character, and possibly you block that avenue of employment for ever to all other old soldiers. I daresay that Colonel Dooner noticed in the Secretary of State's speech on Friday that he alluded to "Sentry-go" as being one of those things which he himself particularly wanted to see reduced as much as possible. Having served in a regiment in which a very large number of men were employed on guard, and where the men got very few nights in bed, I know the evils of it. First of all, as Colonel Dooner says, it is no instruction to a man, and secondly, it is physically most detrimental to him. I hope we shall reduce the duty of "Sentry-go." With regard to the sentry at the barracks gate, I should like to see him in bed. I do not know about the question of fire, except that statistics show that by far the greater number of fires occur between the hours of 8 and 10 o'clock in the evening. If that is the case, the sentry might probably go to bed after the fire time had elapsed. Then there is the question of fines. There are many occasions on which it would be a very excellent thing if you could fine a man, but I daresay Colonel Dooner is aware, as I am, that it is a point of honour amongst men to treat a man who is under stoppages; his friends are very sorry for him and their sympathy is apt to take the shape of beer. I should like to say one word with regard to professional deserters. These men give endless trouble. We know that one bad man in a company can nearly ruin that company. One of these professional deserters and bad characters can do an incalculable amount of harm when he is put in a barrack room with 18 or 20 recruits. If some system could be devised whereby these men could be identified and could be prevented from entering a fresh regiment, it would be an immense advantage in every possible way to the Army. Colonel Fergusson alluded to the question of native troops being used at coaling stations, and he said that he objected to that course being adopted. The troops in these coaling stations will not be natives of those stations, but will be natives of India. There are no finer men on the face of the earth than our Indian troops, and they are perfectly capable of doing the work of guarding such places as Singapore, where we have hitherto locked up expensive European troops, which might have been very much better employed elsewhere.

Colonel FERGUSSON :—I only meant that in the event of their having to face a foreign Power it would be prudent to give them a backing.

The CHAIRMAN :—That they will get from the Navy. Colonel Fergusson seemed to think that the proposed new army corps was an additional organisation to the present Army. That is not quite so. The object of the new organisation is to better utilise the men which we have now got rather than to add additional men that we have no means of utilising. Some years ago I got out the proportion of Militiamen to the male population in every county of the United Kingdom. The results were remarkable; but nothing struck me more than the fact that on the West Coast of Ireland, where work is short and labour is exceedingly ill-paid, the proportion of Militia was so small to the male population. Colonel Lambert has told us that the men come over to England for the harvest, and I am indebted to him for this information, which explains a matter which has puzzled me. Then there is the question of employed non-commissioned officers, which Colonel Hammersley has alluded to, and which we have all known and deplored for years. I remember one particular case years ago. The commanding officer of a certain regiment at the Curragh went to the brigade major and said: "The number of employed men in this garrison is something perfectly appalling! Eight men leave my barracks every morning to go up as orderlies to the brigade office." The brigade major said: "I have never seen one in my life, except the brigade orderly." Therefore, for months, and probably for years, seven men had been employed at the brigade office, Heaven knows at what, and nobody knew anything about it. It was only the fact of a new commanding officer coming in and making a row that these seven lost sheep were discovered. If officers would watch these things a little bit more these cases would not so often occur. I have had many talks with my old friend Colonel Hamilton, with regard to training boys. It would be a very excellent thing if every boy could have some military training; but it is no use having trained men of any sort unless you have some organisation to put them into.

Captain MACDONNELL :—May I interrupt with one observation? Could you not get the Government to carry that out and put the boys into some sort of corps?

The CHAIRMAN :—The question of employing these boys when you have trained them is one of great trouble and very considerable expense, because you must have some organisation to utilise them. Colonel Hamilton was a little hard, I think, upon Mr. Brodrick about the 50,000 men. The 50,000 men are an addition. The 50,000 men which Mr. Brodrick alluded to are to be a new Militia Reserve—a real Reserve—totally apart from the establishment of Militia, which, we hope, the new bounties will tend to raise to its proper number.

Colonel HAMILTON :—I withdraw what I said, but may I ask, does that mean that the Militia—plus the 50,000 Reserve—will be 180,000 men?

The CHAIRMAN :—I hope it may rise to that. I do not think there is any other point I need trouble you with. I will only allude to that which apparently is a bugbear to many gallant gentlemen who have spoken here to-day—the question of conscription. Somebody said that no public man had ever alluded to the possibility of conscription. I would only refer this gentleman to Mr. Brodrick's speech last Friday. I am sorry to have detained you with my remarks for so long a time, but before I sit down I think you will agree with me in thanking Colonel Dooner for his most excellent lecture, to which we have all listened with great interest, together with the instructive discussion which it has provoked.

FIRST MILITARY PRIZE ESSAY FOR GOLD MEDAL COMPETITION.

Subject :—

“LESSONS TO BE DERIVED FROM THE EXPEDITION TO
SOUTH AFRICA IN REGARD TO THE BEST ORGANISA-
TION OF THE LAND FORCES OF THE EMPIRE.”

By Captain J. MARKHAM ROSE, R.M.A., p.s.c.

“Spero Meliora.”

INTRODUCTION.

A GREAT Empire engages in a struggle with two small Republics, and discovers with surprise that tardy victory is only to be obtained by straining every sinew in the task. Yet both the difficulty of the conquest and the painfulness of the surprise have many parallels in the world's history. Small States, time after time, have retained or recovered their independence in spite of all the efforts of famous Empires, aided by the nobility of their cause, the courage and skill of their peoples, and difficulties of country not to be overcome by the trained hosts of their opponents based on distant shores. There is, for example, that noble forty years' struggle when the Hollanders wrested their independence from the power of Spain ; and now, England, warring against a kindred race, has only emerged successful from the struggle after trembling on the brink of failure. History teaches that in the past, where the small State has succeeded, it was generally because the decline and fall of the Empire had commenced, that effeminacy, intrigue, and misgovernment had cankered the heart, and so had weakened the distant arms. Our case is hardly so bad as that, for the issue has demonstrated that the heart of the people is sound enough, but our approximation to failure has also shown that there is greater need for care and precaution in the future.

The present task is to search for organisation lessons taught by our recent experience. Unhappy is the lot of the essayist who is bidden to search for “lessons,” for his very aim bids him pass lightly over the successful part and only dwell where a system has failed. It is his fate,

and may not be avoided; yet he cannot but think reluctantly of the patient energy and glowing deeds which he would feign describe.¹

Older military history again helps in the arrangement of the work. These struggles on the outposts of Empires have mainly arranged themselves into three phases—the first, where the lesser antagonist has everything very much his own way because he has merely to contend with a peace garrison or an outpost; the second, when the outposts reinforced have to check the wave of success whilst preparations are being made for the Empire to re-assert itself in the third. Such a process, with some modification in each case, particularly applies to most of our wars overseas, as, for example, the Indian Mutiny, Egypt (1882), and, in an extended way, to the Soudan struggle as a whole.

In the present case, then, the three phases of the war in South Africa may be said to be:—

1. The Boer invasion up to the middle of November, 1899, including the mobilisation and arrival of the first troops of the army corps.
2. From the middle of November to the arrival of Lord Roberts in South Africa.
3. The re-assertion of empire in the rest of the war.

As it is beyond the subject to deal with the history of the war, and also as most of its events are still fresh in the minds of all, the different periods will generally only be referred to in so far as they deal with organisation. At the same time, since dates and numbers are apt to be elusive and may have a direct bearing on the question, they will often be given. It is unfortunate that up to the present no authoritative statement can yet prove many of them to be reliable, so they must be accepted with a limited confidence, and, indeed, it is quite possible that we shall never know the real facts of the details of Boer organisation and equipment.

THE FIRST PHASE.

The estimate published by the Press immediately before the war put the Boer strength somewhat as follows:—

State, etc.	Numbers.	Guns.
Transvaal - - - -	30,000	60
Free State - - - -	20,000	40
Cape Colony and Natal Boers -	5,000	—
Foreign contingents - -	5,000	—
Total - - - -	60,000	100

¹ Will readers in criticising this Essay also kindly remember the following "extenuating circumstances" due to the fact that the Essay had necessarily to be written in the autumn of 1900? First:—At that time the only information about events in South Africa had to be obtained from newspaper reports which had passed through the hands of the Press Censor. Second:—A great number of my ideas now appear to be old, because of the many books since published and of the many reported speeches both in and out of Parliament bearing on the same subject.—J. M. R.

The estimate of guns is probably too low, and does not include the lighter Q.F. guns, and does not explain the excellent effects obtained by their weapons, which were of the very latest design. Other estimates at times have placed the numbers of men as high as 100,000; but it is extremely difficult to know where they could have come from. The real Transvaal and Free State Boers cannot have exceeded the numbers given above, though it seems probable that the numbers of the Afrikaners from the Cape Colony and Natal and the foreign contingents were considerably exceeded when the Boer invasion was at its flood. Indeed, it is fairly certain that the Boer forces never exceeded 75,000, of whom a minute portion, the Staats artillery, etc., were regular soldiers, the remainder being merely farmers and city population gathered together by the "commandeering" system, plus the unknown contingent of foreign mercenaries and volunteers from European States, and rebels from our own Government, all inspired with the hope of driving the British from South Africa.

To this ill-organised and ill-trained but excellent fighting force what had we to oppose? The troops in garrison in South Africa before the war were distributed as follows:—

—			Infantry.	Cavalry.	Artillery.	Guns.	R.E.
Cape Colony	...	...	2,800	—	300	—	200
Natal	...	...	2,400	700	550	22	—

or about 7,000 men with 22 guns. About the middle of September, 1899, this strength was increased by about 2,000 men, or say, with the addition of the Colonial police, some 10,000 men, to garrison all the important railway junctions and depôts of supply. Yet, before this quite inadequate number was again added to, in the beginning of October, the Boers were already mobilising on the frontier; and double the strength could not have prevented the invasion of our territory by so mobile a foe. However, on the 7th September, the Government had sanctioned a reinforcement of 10,000 men to be despatched at once. For our purpose, it is interesting to learn where this large number of troops was to come from. Unless we called the Reservists to the ranks, our units at home were not prepared for war—they were merely a machinery for training recruits and to supply drafts for their linked units abroad. A large proportion of their rank and file were boys under twenty years of age, unfit for service abroad; and to take these units at this period would only be to hamper our mobilisation system later on.

At this date, 7th September, the units of our Regular Army were disposed as follows:—

¹ This is only fighting strength, for a Parliamentary Return shows on 1st August, 1899:—Cavalry, 1,127; artillery, 1,035; infantry and mounted infantry, 6,428; others, 1,032—total, 9,622.

Arm and Unit.	At Home.	India.	South Africa.	Abroad.	Total.
Cavalry regiments ...	16	9	2	1	28 regts.
R.H.A. batteries ...	10	11	—	—	21 R.H.A.
R.F.A. batteries ...	48	42	3	1	94 R.F.A.
Infantry battalions ...	75	52	9½	16½	153 bns.
Totals in men ...	106,500	75,000	19,000	34,000	224,500

These approximate totals include Royal Engineers, departments, coast defence, and mountain artillery.

The force at home was detailed, with 81,000 Reservists called in, to provide us with three army corps and four cavalry brigades for home defence; or two army corps, a cavalry division, and line of communication troops (about 80,000 men), for service abroad.

As it was not desirable to dislocate the labour market and spoil our main system by a partial mobilisation, another solution of this first difficulty was found. Units in India and in the Mediterranean and Egypt are practically ready for war service at any time, and the 10,000 was made up from these places. Not that these garrisons are normally one man in excess of even peace requirements for moderate security, but there were great apparent advantages for the reasons just given, and because units so called on could more rapidly reach the threatened points than troops from home.

From India we took 5,800 out of 75,000, leaving only 70,000 British, the minimum proportion laid down to help the 140,000 native troops to guard our great possession in the East; but these reinforcements were seasoned men, and could reach Natal a week earlier than from home. (The actual units, with dates of arrival, are given in Appendix No. I.) Nearly half of these had actually arrived, and the rest were arriving when war was declared on 11th October.

At the same period, too, as the authorisation of the reinforcements from India, permission had been given to raise a body of Imperial Light Horse at Durban, mainly recruited from and officered by Uitlanders. This corps was rapidly placed in a state of efficiency, and was the forerunner of many other Volunteer corps raised in South Africa. (See Appendix II.) Previously, Colonel Baden-Powell had been organising police and local troops for the defence of Mafeking, and, aided by Lieut.-Colonel Plumer, had organised a force in Rhodesia to observe the northern frontier of the Transvaal in the Buluwayo direction.

From 21st September the Natal frontier was watched by armed Boers, and quiet preparations in the Free State made war appear unavoidable, and that with both Republics at once, not to mention insurgents from our two self-governing Colonies.

Therefore, on 27th September, 25 companies of the Army Service Corps had been placed under orders for the Cape, sailing about 7th

¹ 9,622. See note *ante*.

October. At this period, too, the Transport Department at the Admiralty were rapidly taking up ships for transport purposes; Woolwich Dockyard and all the great centres for military stores were working double tides; and transport animals, principally mules, were being bought up in large numbers in Spain, Italy, and America. All these were supposed to be merely precautionary measures, but the Press of the whole world was busily engaged in describing what we were doing. Machinery which works so noisily should surely be capable of improvement! Yet there are few who realise how vast this question of the preparation of transport is. A single battalion, on the Natal side of the theatre at any rate, had the following regimental transport:—

	Animals.
1 Maxim gun, drawn by 2 mules, with 2 spare	- 4 mules.
1 Scotch cart (as used in South Africa) for tools	- 6 „
4 S.A.A. carts, at 6 mules each	- - - 24 „
1 Water-cart for cooking-water only	- - - 4 „
7 Cape wagons, at 14 oxen each	- - - 98 oxen.
<hr/>	
14 Vehicles	- - - 136 animals.

Thousands of the Scotch carts and ox-wagons had to be made at home on the South African pattern. Later on, too, traction-engines were sent out, originally intended for the siege-train, but mainly used for ordinary transport purposes wherever roads were available, since they could drag 10 to 12 tons, while the ox-wagons could only take 2 tons. The ox-wagon had the further disadvantage of being 20 feet long, and, with its 14 oxen, occupying 266 yards in column of route. No food could be carried for the oxen, and they had to be turned out to graze, and thousands of them died. They could only do about 15 miles in a day's march, and greatly hampered our movements by their slowness. It is easy to comprehend with such transport how the Natal force train column is reported to have occupied 25 miles in column of route. The transport of each battalion would occupy nearly a mile, to which must be added brigade, divisional, and corps reserves of food and ammunition, and all the hospital arrangements. A supply park alone should take 300 tons of food; a battalion takes 6,000 lbs. of ammunition, while an ammunition park has 130 tons!

What work all this must involve in the theatre of operations, and how much care and foresight at home before the real fighting can commence! The task of Woolwich Arsenal in providing and carrying out the ammunition supply can be better imagined than described. A rejection of the Mark IV. bullet in consequence of the decision of the Peace Conference helped to complicate their task. The pressure was extreme, and it is a matter of the highest credit that not only was the Arsenal able to meet this first demand, but also to keep the Army supplied to the end of the war, but this only by the strenuous labours of 20,000 men working literally night and day. Greater reserves of stores, provided in time of peace, might have greatly lightened this strain, and would have, in the long run, tended to greater economy. But, on the other hand, many

stores were only applicable to this campaign, and would be useless for any other country. Still, the strain would undoubtedly be relieved in the future by the creation of another arsenal in the North of England. And as regards transport, another thing is certain, our Army Service Corps was not nearly large enough for the work required of it, as had been clearly demonstrated by the Salisbury Plain manœuvres of the year before. The 38 companies before the war are now to be increased to 88 it is said, and these will be none too many. Of the provision of ships and animals more will be said in another place.

By 5th October the Boers had assembled strong commandoes along all their frontiers, eagerly awaiting the order to invade, with strong reserves at Pretoria and Bloemfontein. In short, the Transvaal mobilisation was practically complete as regards men, but they had still some work to do in organising their transport and other details; probably the Free State was not quite ready at this date, and the enemy was also waiting for the first rains before declaring war.

On our side, as a result of the previous measures, from 2nd October onwards the 10,000 reinforcement was arriving daily, and Natal appeared to be fairly safe; Mafeking and Kimberley were in some sort prepared for a siege, due greatly to individual initiative. Our limited garrisons were reinforced also by small naval brigades, the Admiralty having made a brilliant move in arranging the meeting of the "Terrible" and "Powerful" on the Cape Station, which shows how sea power may be utilised in such an emergency.

The actual disposition of our troops in the beginning of October is given in Appendix III.

Thousands of tons of stores were being collected in the advanced dépôt at De Aar, which was but feebly defended, and matters were felt to be so advanced that on 7th October the order for mobilising the 1st Army Corps was issued. The declaration of war came on the 11th, followed immediately by the invasion of Natal by some 25,000 to 30,000 combined Free State and Transvaal Boers, firmly believing that they would sweep us into the sea. They so far succeeded that before the first troops of our army corps arrived in the middle of November, Sir George White and the main portion of the Natal troops were securely invested in Ladysmith, and the whole of the Colony to the north of that place was in the possession of the Boers. Further, we had evacuated Colenso and withdrawn to Estcourt, 27 miles further south; Durban was merely defended by a Naval Brigade and hastily raised Colonial Volunteer corps. In other words, between the Boers and Durban there were only about 3,000 of these Colonial troops, two Regular battalions, and a small naval force.

Nor was the situation more favourable on the other side of the theatre. On 13th October the Boers had commenced the famous siege of Mafeking with some 5,000 men under Cronje, while Baden-Powell's levy certainly did not exceed 1,200 men, and he had no guns worthy of the name. No places south of Mafeking were being held for the Empire until Kimberley was reached, and that town had also been isolated since the beginning of November by 10,000 Boers who had pushed advanced

posts to the line of the Orange River. Kimberley was only held by half a Regular battalion, a few Royal Artillery and Police, local Volunteers, and the Town Guard. Moreover, on 1st November the commandoes on the south of the Free State crossed the Orange River, having lost their fear of the Basutos, and advanced to Stormberg Junction, which they occupied, our small garrison being withdrawn without fighting. Similarly, the garrison of Naauwpoort was withdrawn to the dangerously exposed depôt at De Aar. In addition to the Regular troops shown in the table, and the isolated garrisons, we had on this side about 2,000 Cape Mounted Police, 1,000 Cape Mounted Rifles, and 4,000 Cape Volunteers. Many more Cape troops were afterwards raised; but at this period the Cape Colony administration was not at all keen in its assistance. In all the districts conquered by the Boers commandeering went on, many rebels joined them voluntarily, and the commandoes increased daily.

Hence, turn where one would in South Africa, the aspect of affairs was not at all favourable to the ultimate success of British arms, but the history of war shows that this gloomy outlook is part and parcel of the first phase. In our own history we seem always to have been on the point of failure, and have only redeemed our character not so much by careful organisation as by the peculiar doggedness of the race. Things were really now far worse than at Christmas time, but the people at home were quite cheerful, even joyful, for was not our precious army corps and its brilliant cavalry division on the way out, not only to wipe out all memory of present reverses, but also of Majuba!

In our own case, can this general state of affairs on the outbreak of trouble at the outposts of the Empire be avoided? It is evidently impracticable to maintain peace garrisons throughout the Empire strong enough to prevent a sudden invasion; but is it possible to devise means by which a point immediately threatened can be strengthened rapidly enough to repel the first onslaught, and so gain time for full reinforcements? Let us consider what different steps might be taken.

We have always been greatly aided in this part of our struggles by the voluntary efforts of British residents of the part attacked, and this war has given us fresh examples of this. Natal Volunteers and the Kimberley and Mafeking townspeople made resistance possible where the Regular troops unaided would have been at once overpowered. Is a solution of the question to be found in a development of this? There are already many Militia or Volunteer corps on our outposts, and by greater encouragement and with fuller equipment and organisation they, at any rate, would lessen the difficulty. Will not the Empire in Council put these corps in a more satisfactory position for the safety of the whole? Yet white population is wont to be scattered in such districts, and many do not care to train in time of peace, and are consequently not of much use on the outbreak of war. There is, of course, the ancient custom of every warlike race by which every man can be called on to defend his homestead, and therefore to train in time of peace for such an emergency; but compulsory service in these frontier corps could not be logically carried out without conscription throughout the Empire, and even so,

these scattered troops would not suffice to stop anything greater than a mere raid.

Can the maritime forces of the Empire aid? We know of naval brigades in nearly all our wars. We find Alexandria in 1882 policed by the Bluejackets and Marines; we find in an hour of similar stress that Lady-smith is provided with heavy guns and Durban held by the fleet, and Admiral Seymour in China has just marched to the relief of the Embassies. Is this naval solution a better one, or is it a correct use of sea power? It is extremely doubtful. Must the first attack on the outposts of Empire be repelled by the admiral of the station, who is to lay up his ships and land their crews and guns till the Army arrives? However correct such a solution, it is only possible where we have undoubted and unchallenged command of the sea, and even then it is both expensive and dangerous. The seaman-gunner is a very costly article, neither easily nor rapidly replaced, and, with every respect to his valour and efficiency, not sufficiently highly trained for shore fighting in proportion to his cost. Why should he be? He has enough of other work, in all conscience, to take the full ability of the best of men. What would have happened in Egypt if the French had suddenly placed a hostile fleet off Alexandria? Would a second battle of the Nile have resulted from this Imperial system? One cannot say, and probably this is an easily combatted suggestion by the advocates of the system, who would say that we should at least have had sufficient warning to move the crews back to their ships; but Alexandria would have been unpoliced, and, at least, it shows a source of danger. With Admiral Seymour cut off from Tientsin, our fleet was scarcely well placed for the possible, though improbable, case of the hostile combination of the other fleets against us.

Sir John Colomb has a variant of this plan, which seems to have much in its favour, that there should be depôts of Marines or soldiers under Admiralty control at all our coaling stations, who would be immediately available for the admiral's disposal without weakening his ships, and which, while being of use to the Empire in this first phase of our wars, would also be invaluable in naval wars as reinforcements to the ships after a battle.

Both this and the frontier force schemes are worthy of attention, but the real solution can only come from rapid mobilisation of military force and efficient Imperial organisation. To attempt to be strong everywhere on an almost boundless frontier line like ours is to end by being weak everywhere. The strength must lie towards the centre, but so held there that it can be rapidly moved to the threatened point. Then, given a sufficiency of the central force and a smoothness of organisation, the outpost, even though carried, will be rapidly recaptured, and war pushed across the frontier to the hostile territory. Did our mobilisation in the present case fulfil these conditions?

Although many of the details of the despatch of the 1st Army Corps must be of common knowledge to military readers, yet the essay would be scarcely complete without a slight summary of them.¹ The

¹ See Appendix IV.

order for the mobilisation of the army corps was issued on 7th October, and the last day for Reservists to join was the 17th of the same month. The 1st Division sailed on 20th and 21st October, giving fourteen days for the completion of its mobilisation. This is a long period, compared with Prussian or French ideas; but, on the other hand, the problem set us is different in its main particulars. We had to provide good and rapid transport for a long voyage, and to collect food and land transport 6,000 miles over seas, instead of having our magazines formed in peace and being ready to move to the front at once. It was simply an essential of our scheme that the 25 companies of Army Service Corps had been despatched a fortnight earlier, and that the period of embarkation of the whole extended to a fortnight later than the day mentioned for the assembly of the fighting units. Yet, even so, that it should take us a whole month in which to despatch one army corps and a cavalry division (and five weeks for the line of communication troops) is a matter for careful examination; and we shall probably find that, based on the present experience and with careful organisation, we shall be able to shorten the period. Moreover, it was well into November before certain scattered units were despatched, partly, but not invariably, delayed by unavoidable accident. These were troops despatched to flourishing Colonies, where the collection of stores and formation of magazines would be simple as compared with an expedition having its base over seas and actually in the hostile territory. Yet these Colonies were able to supply very little themselves, and all had to be collected either at home or in distant countries, and then moved by sea-transport in long-voyage ships to the magazines in South Africa.

This item of ships was one that no other Power could have contended with in anything like the same period of time. For the men alone we took up and employed 60 large transports, averaging nearly 10,000 tons a vessel, belonging as a rule to the first-class lines, and most of which sailed within the fortnight from 20th October, followed immediately, between the 11th and 16th November, by four more, taking 3 battalions and a mountain battery to replace casualties at Nicholson's Nek. Such a fleet does not sail under the flag of any other Power, and this total does not include the many ships sailing at this very time with horses, mules, and supplies from Home, Australia, India, Naples, Sicily, Carthage, New Orleans, and other places, nor the ships taking the Army Service Corps, and the usual South African lines, which had been carrying, and continued to carry, large quantities of men and supplies during the whole operations. For the South African war of 1878 we took up 19 transports; 47 for the Egyptian campaign of 1882; and for the present war nearly 200, and, on the whole, larger and better found than in the previous instances. Yet our ocean trade was scarcely dislocated, and the price of wheat, a true measure of the dislocation, only rose some 2s. a quarter—from 25s. to 27s., or 10s. less than its price during the Spanish-American war.

The actual rapid and careful fitting of the ships as transports has always presented great difficulties, and we seem to have made steady

progress in this matter, though horse-fittings are still capable of improvement. Again, the actual lading is a matter for careful organisation and in which we have had vast experience, from which, on the whole, we have profited. There were none of the ghastly errors of the Crimea, though, as appears to be inevitable, there were minor mistakes; and contractors do not seem to have been invariably honest, and inspectors of stores in the extreme pressure of work have by neglect connived at the embarkation of inferior quality of supplies.

It must always be a great question whether battalion transport should accompany the unit, for it amounts to a very large total in horses and vehicles, and ships quite ready to carry infantry alone have to be delayed while being properly fitted. Yet a battalion without its transport is to a great extent immobile, and, therefore, in most cases to take it seems most practicable.

It is undoubtedly the soundest policy, and in the long run the cheapest, to take up the most modern, largest, and fastest ships. Less liability to break down, better fittings, quicker transportation, and better condition of troops and horses on arrival are advantages so great as to compensate for much initial increase in cost. That this is one of the lessons of the war there can be no doubt.

Naturally, the length of the voyage makes a considerable difference, and three times the number of men could be carried for trips of less than twenty-four hours' duration in the same number of vessels; and then our national difficulty would be to find the men rather than the ships.

How small our mobilisation was in numbers compared with other nations! We really only despatched about 45,000 men, of whom there were under 6,000 cavalry and mounted infantry, and only 19 field batteries, making 96 guns, 18 howitzers, and no guns of position. This is a very small proportion of mounted troops and guns compared with Continental units, and more noticeable still when it had been the Staff College teaching ever since Majuba that mounted infantry was the most desirable arm to contend with the Boers. It is easy enough to be wise after the event, but the subject of our relative weakness in cavalry and guns has for many years been brought forward by the Service members in the annual debates on the Army Estimates; and even with this relative inferiority in mounted troops we had long been warned that there would be a great scarcity of horses. For the first time we had a practical trial of our system of horse-registration for mobilisation, and large numbers were drawn by this method from omnibus and tramway companies and hunting stables. The value of the system was felt, and the lesson for the future is, that it should be more largely extended.

The approximate strength of the troops mobilised was:—

Units.		Numbers.	Guns.
1 cavalry division	- - -	5,500	12
3 infantry divisions	- - -	30,000	54
Corps troops	- - -	5,000	48
Line of communication troops	-	11,000	—
		<hr/> 51,500	<hr/> 114

This meant drawing to the ranks some 25,000 Reservists, of whom it was most interesting and satisfactory to notice that 98·4 per cent. rejoined promptly, 91 accounted satisfactorily for their absence, and only 1·05 had failed to report. These figures alone are almost sufficient answer to those critics who, as an argument for a return to a long-service system, state that the Reserve is merely a paper force not available for war. To the frequently made statement that most of our Reservists are tramps filling the workhouses of the country, the generally respectable and healthy appearance of the men is sufficient answer. Most of them came from really good employment, and it was satisfactory that the Government and most of the employers promised to keep their situations open for them till their return, and in many cases part pay, or an allowance, was made to their families either by the employers or by subscription among the workmen.

This partial mobilisation had no material effect on our railway traffic, and the movement of the men about the country would have been scarcely noticeable but for the enthusiastic crowds who cheered the departure or welcomed the arrival of each batch. Nor was the labour market appreciably affected, though naturally, but unfairly, the most patriotic employers were most hampered by the loss of hands. It seems that to them the country owes some substantial compensation.

Every man of the Royal Scots had come up, and in four other territorial regiments only one man was away.

7·11 of the Reservists were found unfit for service, not too large a proportion when it is considered that 36·5 per cent. of the men actually serving with the colours were rejected medically unfit or under age, the latter reason accounting for the great part, as none were sent out under 20 years old. This rejection has always been recognised as part of our system, but to have nearly half the ranks of each unit composed of Reservists seems too large a proportion, and a long-desired Army Reform is a scheme by which the age of our recruits on joining can be raised. That nearly half the force mobilised to meet such excellent reputed marksmen as the Boers had not been through a course of target practice for two or three years at least, and were, to a great extent, unacquainted with the latest developments of the weapon they were to use, was the worst flaw. In the infantry an attempt was made to put these men through a three days' course of musketry where ranges were available; but this was naturally a somewhat prefatory affair during such a period of general haste. In other respects, the month which had to elapse before the mobilised units could meet the enemy, gave the Reservists an opportunity of settling down; but this respite would not be obtainable in case of war in Europe.

All the units in this 1st Army Corps were readily made up to war strength as laid down in Field Establishments. Aldershot was the chief centre of mobilisation, and Southampton the chief port of embarkation, but the ports of the Thames, Medway, Clyde, and Cork Harbour were also used. For greater rapidity in the future, and for the possible despatch of the larger force suggested, a greater decentralisation is

required; Southampton, Aldershot, and Woolwich can do no more than their present record without undue congestion. Every commercial port of the Empire should bear its due share and embark the troops mobilised in its neighbourhood, according to the scheme developed later in the essay.

It was not only in the easy despatch of this expedition that our sea power was evidenced. Although the Transvaal had no Navy, yet the 6,000 miles of sea communications had to be guarded, and the Channel Fleet was employed for the purpose, and when, later on, practically the whole of our field army was on the seas or over seas, everything was kept in constant readiness for a naval mobilisation, and the Reserve Squadron was assembled—the real danger in this case being, not from the Boers, but from a possible European embroglio. For this reason the Reserves of Sailors and Marines in the Naval Depôts and Marine Divisions were not available for Service in South Africa, and much heart-burning was caused thereby, yet how much trouble this naval readiness saved us from it is impossible to say.

Finally, before passing on to the second phase, and following General Buller and the army corps over seas, it may here be remarked in answer to certain rabid journalism that at that time practically every Englishman believed that we were sending enough men to settle the matter. Certainly, we argued, Colley had been defeated with six heterogeneous companies; but what are six companies compared with the 60,000 men we should have in South Africa by the end of November? And, again, practically all were agreed that the offers of the Colonies to send contingents, and of our home Volunteers to serve in South Africa, were all very nice and ought to be encouraged, and that was all. There was no feeling that their help was either necessary or even useful. We shall see during the second phase a change pass over the spirit of the people at home.

SECOND PHASE.

Checking the Invasion, and Preparation for the Re-assertion of Empire.—The practically unchecked successes of the Boers in Natal caused General Buller, on his arrival in South Africa in the beginning of November, to change his plans. This essay has only indirectly to deal with strategy, and the reasons for this change concern the subject very little, but their effect on organisation requires attention. The plan by which each Division would have been landed respectively at Cape Town, Port Elizabeth, and East London, and then advanced northwards on the Orange River by the three distinct railways, not only would have enormously facilitated transport and supply, but would also have maintained, more or less, the army corps organisation. From the moment that General Buller decided to send the first arriving troops to Natal and to proceed thither himself, the army corps as a unit ceased to exist, and so even did the Divisions. The 1st Division commander, Lord Methuen,

took the 1st and 3rd Brigades and some other details along the Kimberley line; the 2nd, 4th, 6th, and part of the 5th Brigades went to Natal with Clery, the commander of the 2nd Division; the 3rd Division commander, Gatacre, with a very small portion of the corps, took over the command of the troops in the Stormberg district. The corps troops were variously distributed, and the Line of Communication troops very rapidly found themselves in the first fighting line. The brigade-division commanders found themselves separated from their distributed batteries; and though General French took a great deal of his Cavalry Division to the command of the Naauwpoort district, yet he had to detach various units to do the mounted work of the other columns. For actual disposition of troops of army corps on landing see Appendix IV.

It is evident that while our higher units are only created on the outbreak of war, and never serve together in peace, there cannot be much object in keeping them together in war if distribution serves our purpose better. We had diligently copied the German or Continental army corps system in our nomenclature, even to the numbering of our brigades and the names of our units, but with that it ended, and from the first landing of our 1st Army Corps, an army corps as a unit did not appear again till the end of the war, although eventually there was a far larger force in the field than ever previously in our history. Bad copies of German systems do not seem to be much of a success for our Imperial needs. The division is still practically the highest British unit which has ever worked as such, and the divisions in South Africa were rarely the units as mobilised at home; and it seems advisable that until larger units are available for permanent organisation in time of peace, that the division should be the highest unit referred to in any Imperial scheme.

As regards any practical bad results from the splitting up of the mobilised units, in the present instance, they really seem to have been limited to a slight confusion as to the exact address of any particular unit at any particular time, and to resulting confusion in the despatch of some necessities, and not to have affected the fighting efficiency in the very least. How much greater the fighting efficiency of the force would have been if the divisions had been accustomed to work together in time of peace we can only judge from Continental experience; but that Buller's Natal force gained confidence in their Generals and themselves from their Aldershot work in common, and that the Irish and Lancashire Brigades fought better for their territorial links is universally admitted; while the formation of Guards' and Highland Brigades is a gain in efficiency which has long been admitted; the principle is worthy of a greater cultivation in Imperial organisation.

The transfer of the main transport for the increased force in Natal was a bigger matter, but even for that we were in some sort prepared. It has always been one of the advantages gained by sea-power that the shifting of a base from port to port is amongst the simplest of the important strategical operations of war.

In any case, General Hildyard had assembled the 2nd Brigade at Estcourt by the 22nd November and brought the Boer advance to a

standstill in Natal; and when General Clery had also come up, the Boers fell back on their position at Colenso covering the siege of Ladysmith, now being prosecuted with some vigour. Indeed, the town was in some immediate danger of falling, not so much from assault, for the enemy did not shine in such enterprises, but rather from failure of food and ammunition. Disease also was playing sad havoc with the energies of the besieged, while General Buller was collecting his forces. By 11th December he had amassed General Dundonald's Cavalry Brigade (2,600), four brigades of infantry, or about 21,000 men, a force especially weak in mounted troops. Only two field batteries per division could be allotted, and there was no proper corps artillery; but there was a mountain battery, two 4·7-inch Q.F. and fourteen 12-pounder Q.F. naval guns; these latter a valuable aid, but not sufficiently mobile. With this force, General Buller commenced the advance, and on 15th December assaulted the Colenso position. He was repulsed with heavy loss, especially in artillery, which he could ill-afford, and the relief of Ladysmith was thus for a time delayed.

In the relief of Kimberley, Lord Methuen had very little better success. His column had been hastily organised for a forward movement, and by the 20th November his advance commenced. After three successful engagements, he was badly repulsed in a night attack at Magersfontein on 11th December. His force was the weakest of all in cavalry, and never exceeded 11,000 infantry, 850 mounted troops, and 36 guns. The Boers had probably an equal force, and, not being surprised, compelled us to fall back and re-organise in the Modder River position.

With 10th December came General Gatacre's repulse at Stormberg, and the situation as regards the Second Phase was practically complete. There was no great alteration in the relative fronts of the belligerents until after January, 1900, except where General French about Colesberg was doing a little more than holding his own by the restless efforts of his mobile force.

At home people could ill-realise our want of success, and commenced an eager search for a scapegoat on whom to lay the blame. The Government was happily strong enough not to be led away by panic, and to the news of each reverse made a suitable reply in the early despatch of reinforcements. Immediately following the surrender at Nicholson's Nek, three extra battalions, a composite regiment of the Household Cavalry, and another mountain battery, were sent out, and about 35 battalions of Militia were ordered to be embodied by the end of November. As soon as it was known that Ladysmith was invested and Natal in danger of being over-run (7th November) another Infantry Division, the 5th (a 4th Division having been formed in South Africa), and the siege train were mobilised. These troops, under Sir Charles Warren, embarked early in December, and would arrive at the front before Christmas. A little later, when it became evident that General Buller had had to divide his forces and was scarcely strong enough anywhere for his task, the 6th Division, under Kelly-Kenny, was organised. Before it left, however, came the news of the three repulsed attacks all along the front, and after

Colenso, on the 16th December, the immediate mobilisation of the 7th Division was ordered to be completed by the 27th December and to embark with the New Year. Two days later, Lord Roberts was appointed to the supreme command, with Lord Kitchener as Chief of the Staff, and an 8th Division was warned; but we had now touched the limit of our organisation. With the despatch of the 7th Division we came to the end of the two army corps and Cavalry Division supposed to be ready for service abroad; and the warning of an 8th necessitated the weakening of Colonial garrisons to provide Regular troops for this unit, and these could only be replaced by Militia battalions who would have to be asked to volunteer for the work as they had done during the Crimea. This call on their patriotism was readily responded to, and more than half the Militia was embodied; and all the Reserve, including Section D, were called out; but even these constitutional and precedented courses were not equal to the emergency.

The deep feeling at home and general gloom of that Christmas probably went beyond the real occasion, yet had much foundation in the urgent necessities of the immediate situation. It is true that our losses were small as compared with the great wars of history; and although we had been repulsed we had never been routed. We had merely experienced the fact, for many years taught by tacticians, that frontal attacks against good entrenched troops supplied with modern weapons were almost impossible except with vastly superior numbers or with careful artillery preparation; but both the great superiority in numbers and the guns were lacking. It is true that Boer success had invariably ended with the repulse of our attacks; the enemy, however good behind cover, failed equally with ourselves in attack; and matters were merely at a standstill, yet such a standstill meant ultimately Boer victory, for every day of delay brought nearer the fall of our beleaguered towns from starvation and disease, and meant loss of Empire prestige. We were obliged to attack; the Boers were nearly all mounted, and with this power of rapid movement could reinforce any threatened portion of their entrenched lines more quickly and more secretly than we could assemble for assault. If they would not follow up a success, we could not, for lack of cavalry and mounted infantry. Hence more troops, more guns, and more horsemen were urgently required. Now, our Militia system, excellent though it may be, could not supply us with either guns or mounted troops, and it was necessary to look elsewhere for this vital assistance.

Our organisation provided for the placing in the field of 100,000 men, somewhat lacking in cavalry and field artillery; the Government rightly decided that we wanted double the number with a superior proportion of mounted men and at least an adequate number of guns, and proceeded to look for them.

The Colonies loyally coming to our assistance, supplied us with invaluable contingents of both the lacking arms, no longer accepted merely to knit more closely the bonds of Empire, but with heartfelt gratitude, because they were urgently required. These contingents were most rapidly and efficiently organised and despatched, but not so rapidly

as they might have been, had they been considered in time of peace as an integral part of our field army.

The people at home were no whit behindhand. The War Office asked for and readily obtained a Division of 7,000 Mounted Infantry Volunteers, known as the "Imperial Yeomanry," and organised in 20 battalions of 4 companies each, based originally on our Yeomanry Cavalry units. These troops, added to the Colonial mounted contingents, supplied the deficiency in mounted troops, and by their action served almost to turn the tide of war in our favour; but they took many weeks to raise, organise, and train at a critical period when every day was of importance. Rapidly and valiantly was the work carried through, but there was the same flaw as in the Colonial contingents. Organisation must be worked out in peace, not under the stress of war necessities. Many unnecessary hardships were inflicted, and all sorts of minor difficulties, as in the arrangement of pay and equipment, had to be overcome.

Then the Volunteers at home nobly offered to do their share. The City of London, true to its Imperial instincts, not only supplied a splendid battalion of infantry but also helped out our other deficiencies by a battery of field artillery and two strong companies of mounted infantry. The part taken by the Volunteer corps in the rest of Great Britain requires a little explanation to show how useful it was. The mounted infantry in South Africa was also being rapidly increased, each Regular battalion supplying one company (this statement must not be taken too literally, but this was the theory of the organisation), and the corresponding Territorial Volunteer Infantry Brigade at home was asked to organise a company to replace the missing one in the battalion; the depôts at home not having enough trained Regular soldiers of full age to keep the units at full strength. This was readily carried out, but there was the same flaw—nothing had been prepared in time of peace for such a contingency.

Although these methods might supply, with some degree of efficiency, the lack of infantry and mounted troops, yet they only contributed in a very slight measure to the call for more artillery. This could only be met effectively by obtaining highly-trained men. Of the three arms, the gunner requires the most training to be only moderately efficient, and so, even had it been possible to rapidly equip the batteries—no mean difficulty to get over—the trained men could not be at once supplied. The need was met by sending away at once practically all the artillery at home; but even this did not suffice to provide guns in anything like a proper proportion for such a force as was now accumulating in South Africa. About 100 batteries would be required, and we could only supply 60, leaving only two R.H.A. and nine field batteries for home defence, plus a few batteries of Volunteer artillery armed with obsolete guns and quite unfitted to take the field against modern armies. The formation of seven new batteries of horse and fifty-four batteries of field artillery was immediately commenced, but these could scarcely be described as efficient even by the end of the war, for in December, 1900, they were still short in officers, guns, horses, and trained men. It was the best that mortals

could do then, but how much better if the difficulty had been foreseen and provided for in time of peace!

There was another outcry about the artillery. It was said that the Boer guns were better than ours; but, speaking generally, this was a popular misinterpretation of the facts. Our field and horse artillery guns were admirable weapons for their purpose, but not calculated to compete in range and destructive power with the modern guns of position which the Boers were able to bring up. No European Power mobilises its field army complete with guns of position, and it is not exactly fair to blame our organisation for not having ready the exact weapons to meet this unlooked-for contingency. The Navy in some sort supplied the deficiency with weapons superior in class and manned by highly-trained seamen-gunners and Marine artillerymen, but with fittings and equipment hastily improvised for the occasion. A siege train, as already mentioned, was also early despatched armed with weapons quite equal to any brought up by the Boers; but the Garrison Artillery of the siege unit had to be trained in the working of their pieces after the outbreak of war, and in the Q.F. gun drill were trained at the Naval Gunnery School by seamen. How much better if our siege units had worked the most modern guns of position in time of peace!

In short, the same criticism must be used regarding the artillery reinforcement as for the other arms. It was rapidly carried out, but not so rapidly and efficiently as if all had been prepared in time of peace for such a contingency. It never reached the maximum of efficiency required, and all sorts of minor difficulties in the arrangement of supply, training, and equipment had to be overcome.

THIRD PHASE.

From the Arrival of Lord Roberts to the Annexation of the Republics.—The repulse at Colenso was followed by a reinforcement of most of the 5th Division and additional cavalry, artillery, and details to General Buller's Natal Army. With this added strength, commencing 9th January, he made the attempt to turn the Boer position from the westward, which lasted till after the abandonment of Spion Kop on 24th January, and the discovery on 7th February that the Vaal Krantz position was not the key to Ladysmith.

Meanwhile General French, who, during December, had forced the Boers back on Colesberg, and nearly captured that place, had also been checked during January by the large reinforcements which the enemy had brought up. Indeed, after Lord Roberts' arrival on 10th January, everything was very quiet all along the front in Cape Colony, probably as regards our side by the orders of the new Commander-in-Chief, and the Boers showing their usual reluctance to attack our troops in position. It was the hush before the storm! All was quietly preparing for a great blow to be struck later on.

By 6th February about 30,000 additional men had arrived in South Africa, and Lord Roberts was able by the 10th of the month to concentrate secretly no less than four Infantry and one Cavalry Divisions and corps troops between the Orange and the Modder Rivers. The total strength was about 26,000 infantry, 4,000 cavalry, and, including the siege train and Naval Brigade, 120 guns. By the night of 15th February the Cavalry Division had completed their famous flank march and entered Kimberley, supported in echelon by the 6th, 7th, and 9th Divisions, and Cronje commenced his retreat. Kimberley had then been besieged for 124 days, its losses amounted to 38 killed, 133 wounded, and 4 missing. As is usual in long sieges, there had been more deaths from disease, amounting actually to 1,694, only 161 European adults, but large numbers of natives and children. (The death rate among the children in December was 844 per thousand.)

On the 16th February the force turned eastward in pursuit of Cronje, headed by the 6th Division, while the Cavalry Division with its exhausted horses made a successful effort to head him off. These few days were a period of great privation for horses and men, for in addition to the fact that we had quitted the railway, the Boers had captured a very large convoy at Waterval Drift on the 15th, taking 176 wagons out of 200.

It speaks worlds for our A.S.C. arrangements that this was practically the only instance of importance during the war when our forces in the field were placed on a greatly reduced ration, and this time it was not their fault.

On the 18th, Cronje entrenched at Paardeberg, and the surrounding began. On the afternoon of the 19th, the 7th Division marched in and his encircling was complete; and on the 27th, Majuba Day, he surrendered. The total number of unwounded prisoners was 3,997 (460 taken during the fighting), 170 wounded, and 6 guns. The prisoners were despatched to St. Helena. Our casualties only amounted to 1,250, but the loss in horses from overwork was very heavy, and its results were long felt. The bombardment of the camp had been conducted by four 6-inch B.L. howitzers of the siege train and three machine cannon; three 4.7-inch Q.F. and two 12-pounder naval guns; one battery of 5-inch B.L. howitzers; and six batteries R.F.A.; with seven batteries R.H.A. more or less available for contravallation, but their horses were fairly worn out by the forced march; thus reaching the, for us, respectable total of nearly 100 guns, and these more or less adapted for the work in hand.

On this same Majuba Day a fierce battle was raging in Natal. General Buller had now turned the other or left flank of the Colenso position, and had nearly completed the hard fighting which resulted in the relief of Ladysmith on the next day, the 28th February. The Boers had been weakened by some 5,000 men sent to oppose Lord Roberts, thus leaving perhaps only about the same number to oppose Buller, with possibly another 5,000 round Ladysmith. Sir George White had not more than 6,000 capable of manning his lines, and Buller about 24,000 fit for duty. His guns included four 5-inch B.L. siege guns, two 4.7-inch Q.F. and six 12-pounder naval guns, one battery R.H.A., eight

batteries R.F.A. (one being howitzer), and one mountain battery, or a total of about 70 guns; so at last we were learning something of the right organisation. Moreover, the large accession of mounted infantry was now beginning to be available, and from this point onwards there is little variety in the history. The right kind of force had been organised at last, and Lord Roberts made a slow, regular, but contested advance *via* Bloemfontein, 13th March, to Pretoria, 5th June (and over Laing's Nek by Buller, 10th June), onwards to Koomati Poort, 24th September.

Our progress was slow because, in the first place, though we had now nominally a sufficiency of mounted troops to turn the enemy's positions without committing ourselves to the disasters of the frontal attack, yet we could not keep the horses alive and fit for work in such a country. The privations of the flank march to Bloemfontein had cost us dearly in this respect, and the deficiency could only very slowly be made good for the reasons given in the next paragraph.

Secondly, the difficulties of supply hampered us greatly, not as a rule from lack of proper organisation, but as practically inseparable from the country. All our stores could only be conveyed over thousands of miles of inferior railroads, liable to destruction in much of their length. Such a line was always most difficult to work and protect, and our regimental officers who found themselves in command of posts do not always seem to have acted in the wisest manner or even taken the precautions generally laid down for the fortification of the posts or the safe-guarding of their charge. Over-confidence in immunity from attack seems to have been far too general at first, and led to many minor disasters. Lack of specially trained staff officers for this work accounts for much, but certainly among the lessons of the war must stand the fact that our regimental officers, as a whole, have not shown themselves experts in the art of war. This matter will be further dealt with in proposals for the re-organisation to follow the war.

Directly our forces left the railway as their line of supply, the difficulty of transport was vastly increased, as instanced in General Buller's movement towards Acton Holmes to turn the right of the Colenso position, or in Lord Roberts' march to Bloemfontein. It was not that the difficulty was a new one or unforeseen, but one simply due to the country and inseparable from South African campaigns, and it is probable that no other European Power would have conquered it more easily. A mountainous and generally arid country with no roads to speak of, where horses cannot live, and singularly subject to heavy thunder showers and continuous rains at certain seasons, which soon make the tracks thick in mud or fill every ravine or spruit with roaring torrents, it seems to present every difficulty to transport that man can think of. The trek ox-wagon, the usual transport of the country, is cumbrous in the extreme for the transport of a mobile force; about 2,000 of them being required for an army corps occupying an enormous length of road, and in addition they are so slow that, if the teams are to carry their own forage, their power of hauling about 600 lbs. is limited to about 50 miles. We did all we could to supplement this method by early provision of

Scotch carts and traction-engines, and we seem to have been buying up all the mules in the world during the past year, and yet never seem to have had enough. To the end of the war we could not move as rapidly as our opponents, and the only columns which were really mobile had to take all their stores on pack-horses or in light carts.

It is so simple to say, "Cut down the transport," but the very critics who suggest this would howl if we ran short of ammunition in a battle, or if we had not entrenching or other tools available for each and every emergency; still, it cannot be denied that the great strategists of history have made war with very much less transport and with many less comforts for the men than has marked the present campaign, or at any rate its commencement.

Napoleon's strategy, like that of Stonewall Jackson, or that of Lord Roberts in the movement on Paardeberg and Bloemfontein, depended for its success very much on the privations which the men had to suffer in order to move and strike quickly. Buller's flank march towards Acton Holmes, where the soldiers always drew a full ration, ceased to be a surprise on account of the slow movements of the columns, which were always being delayed for the transport to come up. An army must be well supplied to keep fit, and loses its mobility if it is not; yet it also loses this essential mobility if it is delayed by its train; and so tents and full rations are rarely compatible with the most effective strategy. Hence the difficulty is, to decide what is absolutely necessary as compared with what may with hardship be dispensed with, and then to pack those necessities and move them with the least length of train, and as expeditiously as possible, and, moreover, so that they may be rapidly got at and distributed. It is in this kind of arrangement so necessary to successful work that Lord Kitchener is reputed to have shown his greatest talent, and so, after his arrival, to have changed the aspect of affairs. A training in Aldershot manœuvres, where officers take with them the comforts of a mess and the luxuries of a picnic, and where the men sleep always in tents after having performed a moderate march and having received a full and carefully cooked ration, is not a useful preparation for war. Yet the blame for the whole matter seems to rest on the British public rather than on the War Office or the General. Should our men at Aldershot suffer from a long march or an exceptionally hot day, or in a campaign from lack occasionally of a full meal, the Press begins to howl, and the public back up the Press by writing letters and demanding an inquiry, which is readily granted by a Government which depends on the people for its power. It is rarely the soldier who makes the complaint; he understands that these privations are necessary for successful war, and is well content to suffer if he can only win. The fault then must lie with the people, or with those whose duty it is to educate the people in these matters. There is another point: in a voluntary Army the soldier's life must be made comfortable and attractive, or we cannot get recruits. Every time the Press shrieks about sunstroke, bad rations, or neglect of the wounded, it means a reduction in the intake of recruits. Conscription, or a more thoughtful Press, are the only cures for this.

India is often described as the best field of training of the British Army, and in many things this is so, but not in this question of transport, for the tent there is a necessity as a protection from a pitiless sun; and labour (native labour) is so readily obtainable that a host of camp-followers are deemed also a necessary. There are, of course, other reasons for the exceptionally large number of camp-followers besides the cheapness of labour, but they are readily understood by all who know anything of India, without being enumerated here.

In any case, the transport organisation became much improved in every respect during the third phase, and the lesson was then and there taken to heart and profited by. Eventually, by October, 1900, Lord Roberts had formally annexed the two Republics, and reduced the fighting to a guerilla resistance so hard to stamp out in such a country and against such a foe.

In that same month (October) Lord Wolseley said that we had been able to send from these shores and its dependencies an army of 234,000 men, accompanied by 170,000 horses; and had sent them 7,000 miles.

A Parliamentary paper issued in December, 1900—at that time many men were under orders for the front—showed that, including the 9,622 troops in garrison in South Africa on 1st August, 1899, we had sent out 267,211. From this total we had to deduct:—

	Officers.	Men.
Killed in action - - - -	311	3,018
Died of wounds - - - -	93	952
Died of disease, accident, etc. -	171	6,834
Total deaths in South Africa -	575	10,804
Still missing and prisoners - -	14	1,236
Sent home as invalids - - - -	1,575	35,548
Total reduction South } African Field Force }	2,164	47,588
		49,752.

1,172 Colonials and 8,795 Volunteers and Regular troops not invalidated had also left, reducing the force out there to 207,492. The total estimated for out there was slightly different, round numbers being used, and probably many of those shown as missing had rejoined without being reported. The total was made up as follows:—

Regulars, cavalry - - - -	11,600
Regulars, artillery - - - -	12,700
Infantry and Mounted Infantry - - -	105,300
Other Regulars - - - -	13,293
Colonials - - - -	33,000
Imperial Yeomanry - - - -	8,000
Volunteers - - - -	7,500
Militia - - - -	18,900
Total - - - -	210,293

At the same time the total reduction of our military forces during the war was :—

		Officers.	Men.
Deaths in South Africa	- -	575	10,804
Invalids dead at home	- -	4	231
<hr/>			
Dead	- - - -	579	11,035
Missing and prisoners	- -	14	1,236
Left the Service as unfit	- -	—	1,314
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Totals	- - - -	593	13,585
<hr/>			
14,178			

This gives as actually dead or unfitted for the Service after a year of war about 54 per 1,000, or, taking the dead alone, about 47 per 1,000. Not a really heavy bill as compared with previous wars; and the ordinary peace wastage of a battalion from desertion, death, and discharged invalided or worthless is not so very much smaller!

From the total of 207,492 we have to deduct 12,000 men in hospital in South Africa, so it is practically certain that during the whole war we never approached a fighting total of 200,000, and we thus obtain the following interesting facts :—

To keep up a force of nearly 200,000 men during thirteen months of war in which the casualties were below the average, we had to despatch 267,211 men, and of these our Regular Army could supply little more than half; of the remainder approximately 40,000 coming from the Colonies, 20,000 from the Militia, 10,000 from the Volunteers, and 8,000 Imperial Yeomanry, all this exclusive of South African Town Guards, etc.

Nor was the Regular Army for home defence in any better plight. The actual state of the artillery has already been given in detail, but the other arms were in very much the same condition. After despatching the troops in the beginning of 1900, besides the three regiments of Household Cavalry, there were only five others in the British Isles¹; in addition to the three battalions of Foot Guards at home, there were only six other Regular battalions; of 123 Militia battalions, all embodied, 30 went to South Africa, one to St. Helena, one to Egypt, three to Malta, and two to the Channel Islands, leaving only 86 at home; the Coast Defence Artillery were not so hardly put to it, as they were strengthened by a large body of Artillery Militia, and so were able, to a certain extent, to relieve the strain on the mounted branches of the Royal Regiment; but the Royal Engineers were in exactly the same condition as the other arms, and field companies had to be hastily organised or converted from fortress units. Behind this petty force we had some crowded depot squadrons and battalions unfit to take the field, the bulk of the Volunteers, and the great untrained and unmilitary shop-keeper class of these islands who had only so far sent an occasional representative to share in the fighting, and last and greatest, the Royal Navy, on

¹ Two of which were under orders for South Africa in December, 1900.

whose offensive power, under God, the safety of the British Isles depended.

The British and Imperial instincts rang true throughout the Queen's dominions, but nowhere more than in the heart of the Empire, and directly Parliament assembled¹ plans were laid before it which should provide an Army for home defence. From the composition of this Army many lessons for a future organisation may be learnt.

In addition to the extra batteries and A.S.C., to the establishment of the Regular Army were added thirteen infantry battalions in augmentation of existing territorial regiments, and a new regiment of Irish Guards was created, only to consist of one battalion for the present. As a temporary measure during the war, Royal Reserve Regiments of veteran soldiers were raised by Royal Proclamation, four being of cavalry, one battalion of Foot Guards, and eighteen battalions of infantry. The men attracted to the ranks of these new units by pay of an exceptional kind, were required to be all old soldiers or Marines, and a very fine and reliable body of men they turned out to be, indicating that we lose the trained Reserve at a too early age.

Do the bare statements given above convey an exaggerated idea of the defenceless state of the country against invasion? The people were always being re-assured by the statement that there had never been more men under arms than we had during the summer of 1900, but while admitting its truth, the statement requires some analysis. Who were crowding up the barracks? Every regiment of cavalry had left a very large reserve squadron behind to take the recruits and men under 20 years of age who had been replaced in the ranks by Reservists; these men made a respectable show on parade. The new horse and field batteries were gradually taking shape, the *personnel* consisting of the same kind of men as the squadrons but stiffened by the addition of Royal Reserve artillerymen; but horses and guns came but slowly, the former largely from Argentina and the latter from Germany, and scarcely a battery was really fit to take the field. Nearly half of the Line battalions at home had been left behind as already explained, and these men went to form the new battalions or to stiffen the embodied Militia. It was thus quite usual to find crowding up the same barracks the two half-formed new battalions of a Regular regiment, or—and perhaps this was the most common—a weak Militia battalion and the recruits of the Regulars at the front; and certainly in one case, and if not in one barrack, at least in the same town, an old Regular battalion, two newly formed ones, and a Militia battalion of the same territorial regiment, to which were attached recruits of other regiments! A hopeless *mélange* of cadres without a seasonable stiffening of trained soldiers. This was our Army for home defence: quite unfitted to take the field; and though doubtless it would have given a good account of itself, it could not be called a Regular Army in the usual sense of the expression, which implies a force carefully trained and organised in time of peace.

¹ February, 1900.

The later battalions of both Militia and Regulars sent to the front were not up to full strength, and every Reservist and man of full age was sent out. This meant taking from the other Militia battalions the Militia Reserve, numbering about 30,000 of the best men, and leaving the residue consequently inefficient. It must be added to the indictment that at this time India was short by 10,000 of its British garrison—an arrangement always to be deprecated—and that during the trooping season of 1899-1900 none of the Regular drafts were sent to the units out there, so that they were gradually falling below strength; our Colonial garrisons also were not in their usual state of efficiency.

More men were certainly under arms in England last summer than usual, but never for thirty or forty years previously had we had so small a Reserve behind the first line assembled in camp and barracks. The Army Reserve and Militia called out and even the old soldiers specially enlisted, there was absolutely nothing left but the Volunteers (there is no word to be said against them, and during this time of stress they had done splendidly and fully justified their existence); but there is a certain danger behind this justification. They exist to back up a Regular Army, not to replace it. They have no cavalry, no modern mobile artillery, and in all arms lack that thorough training and discipline which should mark the Regular soldier, and more and more every year their recruits are drawn from the same class as the recruits of the Regular Army, and so can put in no claim for greater confidence in their trustworthiness as coming from a better-to-do or more educated class than the Regular. The great middle class of the nation remains practically untouched by our military organisation, and supplies no proper quota to our ranks either for attack or defence. This is a real national danger, which does not exist in any other country in Europe.

The whole populace of Europe has seemed to sympathise with the Boers and to have hated us, yet it is an exaggeration to say that the country was in real danger of invasion. It cannot be too often repeated that so long as the Navy is maintained at its right strength such a danger does not exist; and without a paramount Navy, our Empire must also perish. Then it is a real mistake to spend too much on a force which is only organised to protect us from a danger which should never exist; and the Volunteers have told us in no uncertain voice that the money which was spent this year to give them an extra training was wasted. The Volunteers themselves did not want it, did not appreciate it, and as a rule did not profit by it; and the extra musketry course was nearly everywhere a complete farce. Certain corps may have been improved by the training, but speaking generally the money could have been more profitably employed in providing a force suited to our Imperial needs.

Where our system broke down badly was in providing an expeditionary force of 200,000 men to deal a hostile blow over seas, and, looking generally at our past history and our probable future need, that is the use

¹ The 16th Lancers and two batteries R.F.A. had been sent additional to force Appendix I.

of our land forces. We may at any moment require double this number to bring a war against a formidable Power to any sort of conclusion ; four times the number to be really victorious on land, and ten times the number to cope with the land forces of the Great European Powers.

Regarded in this light, our military organisation is criminally inadequate. To put the whole blame on the War Office is worse than unfair—it is ridiculous. The Empire as a whole has been warned repeatedly that such a breakdown might happen, and when it was told definitely that we were only prepared to put two army corps into the field for a foreign campaign, while other nations could put twenty, had feebly doubted if we could do even that much, but had been on the whole fairly content with that promise. What the War Office had promised the War Office had done, and done it with a celerity that disarms honest criticism. It had mobilised and dispatched a larger force more accurately and more completely than ever before in our history ; and, taking distances and other matters into proper consideration, had beaten also the world's record. Yet, passing away from the consideration of the Third Phase alone to "General Lessons of the War," was not the result eminently unsatisfactory ? Would it not be worth the country's while to look into the matter ? Perhaps the omnipotent elector and taxpayer may have forgotten that in order to break the power of Napoleon, besides having the command of the sea, we had to pay about £50,000,000 in subsidies to other Powers to help them keep their forces in the field, and that because our own Army was too small for its work. In those years the national debt went up from £110,000,000 to £900,000,000, with taxation in proportion. Armaments are far more costly and vastly larger now, so that these figures, enormous though they may seem, are nothing to what we might have to pay in a war with a European Power to procure peace, even though we had the most undisputed command of the sea, because we have no Army capable of dealing a blow on land. At present the Empire has no right to complain of the War Office ; the matter is in its own hands ! With a voluntary Army and with the money voted, nothing better can be done. The mobilisation of 1899 was simply excellent as a mere work of organisation compared with most examples of history ; with the Crimean Expedition ; with Egypt, 1882 ; with the invasion of Cuba ; and so on. The country had got exactly what it had been satisfied to be promised, and more than it had paid for, for the Estimates do not cover the zeal in peace-time of hundreds of soldiers and civilians who have been doing far more than they have ever hoped to be rewarded for ; and, on the outbreak of war, no Estimates cover the glad enthusiasm of the Services and of the Empire as a whole, which either made light of the hardest tasks, or encouraged, aided, or kept off despondency, according to the particular lot of the individual.

We had to take extraordinary measures to raise an expeditionary force large enough to conquer two insignificant Republics, and therefore were completely incapable of terminating a favourable naval campaign against a European Power by a *coup-de-grace* dealt ashore. Still, with practically no trained and organised Army left at home, we were in no real

danger of invasion. Hence it is suggested that the most suitable form of national expenditure, after assuring naval predominance, is to prepare during peace a powerful Army for service abroad rather than one for home defence, remembering always that the force for offensive strokes is still available for defence until such time as the war can be carried into the enemy's country. The value of the Volunteers is not disputed, inasmuch as they gave invaluable assistance to the expeditionary force, but their training should adapt them a little more for this purpose: we could not send them to China the other day, for instance. They would be of more value, too, if they touched a higher class than that from which the Regular troops are now drawn, and the country seems to require to be warned against trusting to this force as trained at present as though they were anything like equal to a mobile Army of the same numbers. Perhaps, indeed, there might be a little money left over for a mere defensive force, after we had carried out the two main objects; but, at whatever cost, the two main Imperial objects should be carried out. In all this stress of war of 1900, there is no nation whose average of wealth, of comfort, or of luxury can equal ours; and a little less of each all round would only tend to improve the race by hardening it. Make life too easy, and there follow in a sure succession effeminacy and the incapability for hard and strenuous work. At any rate, a largely increased expenditure on the Army might not be such an unprofitable matter as a mere matter of assurance to gain peace, judging from the quoted expenditure in the Napoleonic wars.

So far the criticism has been confined to the total numbers obtainable, but there is much more to be said about the *quality* of the *personnel* and its training. However large a Regular Army we might have had available at home in the autumn of 1899, there is no evidence that we should have thought it necessary to mobilise more men than we did until we had been taught in the hard school of experience. There is no branch of military science which teaches that 70,000 trained soldiers should be unable to conquer an equal number of partially trained farmers, etc., such as composed the Boer armies.

In short, it cannot be disguised that the quality of our force was not good enough. The officers were not highly enough trained, and the men, plucky and self-denying as they undoubtedly were, in addition to some lack of training, had neither the physique nor the stamina for the work.

To begin with the officers. At the period of greatest stress there were practically no Regular officers left in England except those holding such appointments as are more indispensable in war than peace. When we call up our Reserves we have no Reserve officers proper who would come in automatically to their units as would be the case on the Continent, and certainly that we should be short of officers to any serious extent is a matter that had not been generally recognised. There always seemed to be so many retired officers about who expressed themselves willing to serve, or who were enrolled in the Reserve of Officers; there were always so many candidates for the competitive examinations, and so

many of the unsuccessful ones seemed to write letters to the papers lamenting their loss of a career, that we always thought that to fill up the cadres with officers could not present any serious difficulty. Let us see what happened. By Christmas, 1899, the units in the field were only kept officered by borrowing from Militia and other units. The hundred and one billets it was necessary to fill up for Staff and Line of Communications could only be filled by taking Marine officers and those on the Indian establishments. The Military Schools were interfered with. The Staff College was closed altogether. Instructors were taken from Sandhurst, and the senior classes of cadets, both there and at Woolwich, were taken with their course uncompleted. In short, by that time all the ordinary sources for obtaining trained and qualified officers of certain ranks were exhausted, and the worst strain was yet to come. The ranks in the Regular service which it is difficult to fill up in war are those of captain and trained subaltern. Many captains are necessary for Staff appointments as well as those indispensable for regimental duties; and those on the list of the Reserve of Officers of a suitable age are not nearly enough to replace those required for the extra posts. Captains in sufficient numbers can, of course, be obtained by the process of promoting the senior subalterns, but these latter are the very officers most expended in war both by bullets and disease, and this means of supplying captains soon comes to an end and leaves the units in a very bad state indeed. To have nothing but inexperienced subalterns fresh from a cadet college is not good for troops going into action for the first time, and the number of non-commissioned officers who can or will take a commission is very limited. For the troops at home these ordinary channels for supplying officers was completely exhausted, and we were very soon taking officers who had no military education whatever. With the raising of the new units in February, more and more young officers were required. We obtained them in large batches by nomination from the Universities and by direct appointment of various kinds, and certainly the officering of the new units was no small part of that general unfitness to take the field to which reference has already been made. A battalion would be commanded by a colonel (possibly from the Reserve) assisted by a Reserve major and possibly one captain from the same source, and then a batch of newly appointed second lieutenants with no military experience whatever. Undoubtedly the most useful age for a regimental officer is between twenty-five and forty, and it was a just distribution of officers between these ages which was lacking. The squadron, battery, and company officers were either too old for their work or too inexperienced. The only cure for a recurrence of this defect, in its present aggravated form, appears to be the very considerable increase of the reserve list of officers, and to make it include young officers with some training as well as those who have retired from age or left the Service because they were tired of it. Evidently from the comparative ease with which the Imperial Yeomanry was officered there is plenty of good material in the country for the Reserve, but equally evidently we have not yet discovered the way to induce these gentlemen to prepare themselves for war, for we cannot

get them to join the Militia or Volunteers in time of peace. For years the great difficulty of obtaining officers for these Services has been one of their defects: and our need is far greater than this, for we also require many more officers for the Regular Army on mobilisation, when the Militia and Volunteers require all their own officers. Our previous mobilisations have always been so partial that our faulty system of borrowing officers from the units not mobilised has always sufficed to bring our expeditionary forces to war strength, and the extra staff officers for line of communication and other duties have always been obtained, as in the present case, by special service officers. Now this system, besides being obviously unsuited to a complete mobilisation, may also give rise to a mistaken method of obtaining our generals. The only officers in these days selected for promotion are rightly those with war service, hence to pick a man from his unit for special service is practically to pick him for special promotion, if he only does fairly on his campaign. Now there is certainly an idea in our Service that the simplest way to get selected for this kind of work is to come to the front at home sociably or in some kind of sport, so that the good regimental officer who is more devoted to his work than his play does not get quite a fair chance when these special missions are going. It would surely be a more complete system of organisation if staff officers could be openly appointed in time of peace to the units they would join on mobilisation, and if the officers selected for special service could be taken on recommendation from commanding officers of regiments mobilised for that part of the theatre, and if we had a reserve of young officers trained and ready to bring up our units on mobilisation to war strength and to replace those officers who may be required for staff and special service, and to fill up the first casualties. It would seem desirable that, as on the Continent, these reserve officers should belong to particular units in time of peace, and train or manœuvre with them occasionally. That these officers cannot be raised and trained without some special inducement is another sufficiently self-evident fact.

But more serious still than the lack of officers is the charge of incapability which has been raised against them. Taking the case of regimental officers first, the attack on them by newspaper correspondents has not been very serious, as a rule limiting itself to the vague statements that they are not worked enough in time of peace, and think more of their social than their military duties. It is easy to make an assertion of this kind, but not easy either to prove or disprove it: the average Briton does not wear his heart on his sleeve, and it may just be possible that the journalist who is not really intimate with the Service does not understand a certain mannerism and *façon de parler* which are common in the Service.

On the other hand, most soldiers will admit that some considerable ignorance of our trade has been displayed by the commissioned ranks, and that it would be quite possible to do a little more work; but the majority will be inclined to add, "Why should we?" If a man only earns half of his income by a profession, is it not logical that he should

only give half of his time to it, unless there is such competition that he must either work or give place to a better man? Of course there is patriotism to be taken into the equation, but such a sentiment alone will scarcely keep a man at work year in year out in the dull routine of a garrison town. These are home-truths, but they and the following are what many soldiers are saying at the present time: "If you can get a better man for the job at the price, do so." "Our patriotism is quite strong enough to make us help you; our keenness will make us do a certain amount of work for the love of the thing; but if we are to give up our whole time, it is not unnatural to expect that we should be paid as in any other profession." The only other cure is in compulsory service, but that is a question to be dealt with separately. A word of warning to those of the British public who are asking for better officers: Owing to the sudden demand for officers just now, all the examinations have been made simpler (except for sappers they were never really very stiff), and many officers have been given their commissions without any military schooling at all, and thus the only effect of the war so far has been to lower the standard of intellectual attainments rather than raise them, so it will not be surprising if the young officer of the immediate future is somewhat less still of a shining light intellectually than his immediate forbears. Moreover, for the extra units raised, an extra flow of candidates will always be required, and either the attractions of the Service must be permanently raised or the intellectual standard permanently lowered, if we are going to keep to a voluntary Army. An officer in the Army cannot live on his pay as things are at present, and in a free country it is impossible to keep moneyed officers out of the Service and prevent them from raising the general rate of living of the remainder. An officer of the Royal Marines can very nearly live on the same rate of pay, but this is only made possible by very carefully organised permanent messes at head-quarters, which the Admiralty helps to keep up, and by the assisted messing afloat. Such an economical system is impossible in the shifting messes of the field army, unless the War Office will step in and furnish the messes and the quarters as is done in the Navy. It is argued by many that if the Service were made more economical we should get a more hardworking class for the commissioned ranks, sons of officers and clergymen, etc., who are at present debarred by the expense from joining. This remains to be proved; there is no hope of future increase of income as in other professions, and the man who joins poor will remain poor all his life. The places taken in the competitive examinations for the Marines are a trifle higher on the average than those for the Artillery and Line, but then the parents of the Marine officer are spared the expenses of Sandhurst or Woolwich, which makes parental influence very urgent.

It would be a step in the right direction if the country would educate all its officers free of cost, as so many sons of officers and gentlemen are kept from entering Sandhurst, Woolwich, or the Militia by the expenses of those methods of joining the Service. It is certainly to be hoped that the educational standard will not be permanently lowered.

It is quite low enough already, lower than that of France or Germany or United States ; and if a physical test were in part substituted, it would be a retrograde step. No one has complained of the lack of physique of our officers on campaign, and the strong man does not necessarily make the best leader ; endurance is not to be tested by strength or weight, and is probably more a mental quality than a physical one. Certainly, those who take low places in the competitive examinations do not seem to be any stronger than those at the top, and on the average are far idler and less efficient officers.

With regard to the higher education of staff officers, there has been a great deal of public criticism during the war directed against the Staff College, but very little of this will bear close examination. However, lest we omit a lesson, let us see what it amounts to. The first charge takes as a standard our works on tactics and strategy, mainly written by Staff College men and based on our own or foreign experience, and blames our officers for neglecting some axiom of those books.

The second charge blames the officer for slavish attachment to those books in a country and against a foe for which they were never intended. They, the charges, simply amount to this : it is wrong to fail, and must be due to either too much teaching or too little, and in either case the educational arrangement must be wrong ; but whether our officers are taught too much or too little, the critics cannot decide. The fact is, that in war no one can be always right, and it is hopeless to expect that any system of education will make a perfect officer, but it has certainly not been clearly proved by anyone that we could have done as well or better without a Staff College. Such tactics as we have at present have emanated from the Staff College, and without such an institution our general service knowledge of tactics would be back in the dark ages. Also it has been pointed out that some of our most successful generals have not been Staff College men, while others less successful have had that training. This is scarcely a proof of anything, but in any case the Staff College training of twenty years ago—the period when these generals would have been studying there—is not of much use to the officer of to-day. Unless an officer has kept up with the times, and improved his theoretical work by practical experience, he cannot figure as an expert, and for neglect of this after-work the present Staff College course is scarcely to blame. Might it not be possible to have some kind of revising course occasionally, so that officers could go back to the College for a few weeks to hear the very latest ideas ?

A politician had recently to apologise for an election speech in which he playfully suggested that De Wet, when caught, should be made a professor at the Staff College. There is a great deal in the suggestion read in an altered form, that we should always have some Colonial officers at the Staff College, then, at least whatever portion of the Empire was discussed, we should have at hand a man who really understood the situation. But it is interesting to note at the Staff College, when Indian affairs cropped up, those young officers who had real frontier experience were not more listened to than the man who could

write or talk brilliantly on any subject, of course including the frontier question in dispute, and this tends to diminish the one-sided view. People who live on the spot are to be listened to gravely and seriously, and everything is improved by their presence; but the almost inevitable narrow-mindedness or concentration on the subject requires to be a little discounted. *A propos* of this, there seems to be a source of danger in that we seem to be about to reform our Army as though all our future wars would take place in South Africa, on the same principle that the Staff College for thirty years has done little else but analyse and thrash out the lessons of the Franco-German war. Let us now take a wider view, and, by including the ends of our Empire in our military conferences, endeavour to keep our views broad and adequate to the needs of the Empire as a whole. Further, let us try to rid the Service of the idea that the theory of war is a thing which must be confined to the blackboard and kept alike out of our peace and war manœuvres. If our theories will not work, it is not that the study of war is wrong, but that the professor has become narrow-minded and must give place to one with broader experience. So far as one can judge, the errors of the war have been mainly due to a neglect of theory rather than to a mere slavish following of a blackboard idea. For example, South Africa to-day is said to be strewn with "implements entrenching," because the men were not able to carry them, and said that in such a soil they were as useless as pieces of tin. Yet we repeatedly suffered for not entrenching, though our opponents managed to do it invariably. Perhaps the tool may not have been the best for the purpose, that is merely a reason for reforming the tool or its method of transport, not for saying that the theory of entrenching is impracticable and must be abandoned.

In any case, theory alone will not make a successful general, but lack of it will certainly lead to failure. The carping against the Staff College is not new, and is part and parcel of that English spirit which condemns everyone who reads as a book-worm, and which understands "theory" as being "that which is not practicable," and so will have none of it. It is probably this very spirit that has led to most of our disasters, or, rather, tactical mistakes in South Africa. On search being made too it will be found that those non-"*p.s.c.*" men who have succeeded, have done so by following Staff College principles, and frequently aided by the Staff College men on their staff. In any case, do not let us make a retrograde step, and abolish the place, but rather endeavour to find out what are its defects, for it has many, and improve them. The place has been so snubbed in the past that neither its teaching staff have always been the best officers or those most suited for the work, nor have the candidates always been quite the best, as the rewards for the work have been so small and it has been always possible to get on as well or better without the certificate, for example, as a frequently selected special service officer. If these special service officers are not to be taken purely from the units mobilised, then they should be taken from *p.s.c.* men in preference to all others as a continuation of the training, for no *p.s.c.* certificate should be granted to an officer who is not apparently fit to be a special

service officer. But an officer who has displayed the keenness in his profession necessary to take him through a Staff College course should not be hastily judged. Whatever his defects, if he is keen and hard-working it is probable that he, if given a chance, will overcome them; and in the staff of an Army there are billets for all men of capability; but there is no room for the incapable, who should be mercilessly rejected at the Staff College itself.

Turning now to the *personnel* in the ranks, its greatest defect in the British Service has already been alluded to. In the Regular Army we practically get nothing but the labouring classes, and do not do more than touch the skilled artisans; while the shop-keeper and small farmer class really give no personal service at all.

So far, every historian of the South African campaign has had nothing but praise for the men in the ranks, yet because he has fought so splendidly is no real reason for burking this matter. In December, 1900, no less than 6,834 men had died of disease in South Africa, and more than 35,000 men had been sent home as invalids out of the grand total of 267,000. This does not definitely prove, of course, that the men were of bad physique, since it is a well-known axiom of war that far more perish from disease than by the bullet; still, that the force should be reduced by nearly 20 per cent. of its rank and file by disease alone in a comparatively healthy country is a matter worthy of consideration, in this twentieth century when medical comforts and science and organisation generally have done so much to alleviate the soldier's lot during a campaign. But a glance at the last report of the Inspector-General of Recruiting gives an adequate reason:—

1. About 34 per cent. of the 1899 recruits were under standard, and known as specials.
2. Out of every thousand recruits, 649 belong to the lowest classes, 141 were artisans, 103 mechanics, 68 shopmen and clerks, 9 were "professional" men (one always wonders wherein they had done wrong or failed in the battle of life), and 30 were boys under 17. This cannot be a fair specimen of British manhood.
3. In the same thousand, 71 were well educated, 899 were able to read and write, 13 could only read, and, even in these board school days, 17 were unable to either read or write. Is this the best we can do in a voluntary Army?
4. Of these, 15 per 1,000 are invalided in their first year of service, and 17 in the second. If our system of training is healthy (and other statistics show that it is), then we cannot have a healthy class to start with; and yet of the men who presented themselves about 320 per 1,000 were rejected at once, which shows that there is a still lower class physically who would serve. Is it from these that we are to get our extra recruits required for the already authorised increase of the Army?

5. Again, of the recruits who join under our present voluntary system, 35 per 1,000 purchase their discharge within three months-for £10 (presumably from the better class of recruits, since they have this sum available); and a further 34 per 1,000 are allowed to go on paying £18, making a further reduction of the better classes.
6. After all this it is not surprising to learn that out of an Army of 290,914 we lost in the year by desertion 2,482; that there were discharged for misconduct 2,158 more; the total discharged as invalids being 3,377 and by purchase 3,623, and from other causes not specifically explained an item of 1,756 more; or a wastage of 46 per 1,000 in time of peace, which is practically the same rate as the death losses in the first year of the war.

History shows that the residue are keen about their work and eager for fighting, but it is evident the men are not physically or mentally of such a high class as is required in a small voluntary Army like ours. And quite apart from statistics, those of us who are familiar with the appearance of an ordinary British battalion on parade at home, will readily concede that the men are scarcely a good sample of the Empire's manhood. The argument that they are quite up to the standard of Continental troops is easily combated, for if they were to be opposed to French or German Armies they would be outnumbered by ten to one, and therefore should be ten times as good, and the educated men in the ranks of these Armies are an incalculable source of strength.

Were the general average of our recruits over twenty years of age, we should have a real Reserve of 80,000 men and the units would be able to go to the front in something like their peace composition; and while the mobilisation was going on, there would be time to revise the training of the Reservists. It is also the youth and poor stamp of the recruits which make the disease and desertion wastage so high. Not strong enough for their work, they either fall victims to it or desert to avoid it. Of course this is only a partial reason, and does not include all the causes which lead to this result. Undoubtedly we are afraid to work our men hard for fear of driving them to desert, or what is worse, of preventing the present scanty number of men from enlisting. The recruiting in 1899 was better than in previous years on account of the additional trouble that had been taken by the Government and by private goodwill to provide employment for Reservists; and at the end of the year by the generous way in which Reservists and their families were being treated on mobilisation. If this was a good year, what must the bad be like? In the coming year, 1901, the war fervour will have passed away, and to make good our enormous wastage we shall have to compete with the open labour market on very disadvantageous terms. There seems to be no reasonable alternative to paying a greatly increased wage, and by such a system of re-organisation as will make the Army really popular. We cannot make less work one of the inducements, for the

training is incomplete enough already, and reports from South Africa show that in scouting, in marksmanship, and in entrenchment work our men were most defective; but the training might be made more practical and more interesting. It is suggested, for instance, that the extra money to be given in wages should depend on actual skill in the profession of arms; that in every arm there should be at least two classes of men in the ranks receiving considerably different rates of pay¹; in the infantry the classification to depend on marksmanship, and general stamina in marching, to be tested not only by the ordinary musketry course, but also by firing after a long march; in the cavalry, for scouting and reconnaissance duties; in the artillery, as at present, for gunnery and driving respectively; scouts in the infantry and artillery to be regarded as specialists and paid accordingly,² and marksmen in the cavalry to be similarly treated; lack of efficiency in the annual course to cause reduction to the lower rate of pay again as an exceptional punishment; the pay of N.C.O.'s to be increased, so that the Army becomes a real trade for good men. There should be more instruction actually imparted by the subaltern and less by the sergeant for the mutual improvement of all ranks, but for this there must be a redistribution of duties; less leave for the subaltern, and he must not be taken from his men for the red-tapism of boards and courts of enquiry, where three officers are constantly being assembled to do the work of one.

There can be little doubt that troops moved to the front in the modern fashion by ship and train arrive in a very "soft" state for commencing the actual work of a campaign, but the private soldier rarely comes from a class which will appreciate the value of being "hard" and of exercising the necessary self-denial to arrive in that condition. He is generally "soft," except when he is made to march to get "hard." But the personal training of the subaltern should teach the importance and the secret of this, for to give him credit the British subaltern is generally in excellent condition, and, if allowed a freer hand with his men in field exercises, such as scouting and outpost work generally, will be keen enough. Another point—General Buller has said that the Boers could see two miles further than our men; but how rarely do our men ever see two miles at all, and use their eyes to report what they have seen! The town recruit whose vision-field has been mainly limited by the brick walls on the opposite side of the street has very small idea of the appearance of country objects even one short mile away, and much may be taught him by the subaltern, who, feeling himself really the instructor, will take care that he knows more about it than the man he has to teach. But for real value in scouting and so forth we must depend on the specialists, who will mainly come from country recruits used to look long distances all their lives. For efficient scouts at present we have to look to those subjects of the Empire born and trained in the Colonies, and we might always have a few of them at home as instructors. This reminds one that

¹ We might try 2*l.* a day extra for first-class soldiers to begin with, but again raise the amount if found insufficient.

² 4*l.* a day extra.

so far the lessons of the war treated of have only had reference to the Home Army and not to the best organisation of the land forces of the Empire as a whole.

The grand lesson of the war has probably been the assistance rendered by the Colonies. So far the reports on the mistakes accompanying such aid have not come in, but there must have been blunders of some kind, for in our experience they seem inseparable from matters military; so it is very hard to draw any further lesson than that already enunciated. "These contingents were most rapidly and efficiently organised and despatched, but not so rapidly as they might have been had they been considered in time of peace as an integral part of our field army."

If the Empire means to properly use its strength on the outbreak of war it must properly organise its resources as a whole, and the mere consideration of the formation of the home Regular Army is a very small part of the organisation of those resources. The difficulty lies in that there is no ground-work on which to build a common organisation throughout the Empire. At home we have a Regular Army of boys being trained to provide drafts to keep certain Regular troops, forming the large garrisons of India and the smaller garrisons of certain coaling-stations and Crown Colonies, up to strength; behind these schooling cadres to fill them up to a fighting strength, we have the Reserves; behind them again a voluntary Militia, more or less neglected and very slightly trained; and in the third line a large force of worse trained and worse disciplined Yeomanry and Volunteers; but covering all a very grand and efficient Navy; the whole costing sixty to seventy millions annually—a great burden, but still less than that endured by the tax-payer on the Continent of Europe. Up to the present the tax-payer has said little, as in comparison he has had little to complain of, but he has a legitimate grievance if he can prove that he is paying this huge tax to protect the trade of the Colonies. On the other hand, the Colonies cannot be taxed to provide armaments over which they have no control. So far as our experience of this war shows, directly we have a real need of their assistance it is at once given and with the best will in the world, but no amount of goodwill can make up for neglect of peace organisation, and much of the splendid material is not used to the best advantage. The troops of each Colony are organised, raised, and trained on slightly different principles, not only from the Imperial troops, but also from one another. One Colony may be a shade more enthusiastic in its loyalty, and offer a larger or better equipped contingent than another; one Colony may have felt itself more exposed to attack than another and so have had its land forces in a better state of organisation than another, and so on. There is not anything in any Colony which exactly corresponds to our division of our land forces. Militia service in one Colony means one thing, and in another Colony another; and the different kinds of Volunteers differ more widely still; and taxation for military purposes varies again—some subscribe to the Imperial Navy and some do not. There is no common foundation at

present on which to organise. We are all children of a common Empire, but one renders service to the mother in one fashion and one in another. The burden, loyalty, and responsibility are common, and should be borne and shared equally. But this cannot be carried out without some measure of federation; a scheme in which all have an equal voice, and wherein, with the general common-sense and business habits of the British race, none but the experts are expected to speak at all. The late Imperial Federation League has long ago transformed itself into a society which strives only for this end, Federation for attack and defence. Its evolution having taken place at a time when our naval supremacy seemed to be threatened, very naturally its views deal mainly with a common Navy, but after this South African experience it is probable that they will include a federated army.

Then with all gratitude for the loyalty of the Colonies and with every welcome to their ready and invaluable assistance, could not their military resources be organised so as to be of more use to the Empire as a whole, and could not the blood-tax be shared *pro rata* to the interests involved? For this purpose, the Navy, the Field Army, and the Marines might be equally recruited and supported by all, while the Territorial Militia in reserve to the Field Army might be made a similar force in most respects throughout the Empire.

The Volunteers to be given clearly to understand that they only come in fourth line to the Navy, Army, and Territorial Militia, and only after these have been placed on a satisfactory position should they receive any of the tax-payers' money, because they only half fill an Imperial need; or they might prefer to wholly fill it by placing themselves under a strict discipline and making themselves always available for service abroad; but this seems impossible for the men who compose the force as now constituted in England. With these ideas the building up of the scheme which will fill most of the remainder of the essay will be concerned. Before proceeding to this stage, it will be as well to sum up what may be considered the lessons of the war.

SUMMARY OF POINTS REFERRED TO IN PRECEDING PAGES.

1. Required improvement in the system by which the outposts of the Empire can be rapidly reinforced.
2. Increase of Land Transport Department in men, stores, and horses required.
3. References and suggestions regarding the sea and land transport generally.
4. Lack of suitable horses was not confined to the transport service but also extended to all the mounted branches.
5. The number of mounted troops would appear to be sadly deficient.
6. A higher proportion of both mobile and position artillery required.

7. Organisation of the Reserves capable of improvement.
8. Militia requires and deserves more attention.
9. Our Regular Army is not equal in numbers and quality to the work which it is likely to be called on to do in a big war.
10. No plans for utilisation of Yeomanry, Colonial Forces, and Volunteers for service abroad appear to have been prepared.
11. Greater decentralisation in our plans of mobilisation and organisation is seriously required.
12. Peoples of the Continent have shown a marked distrust of our national greatness, and our own population do not sufficiently realise the numerical inferiority of our forces. The Fleet saved us from actual dread of invasion.
13. War training of officers and men requires improvement.
14. Some measure of Imperial Federation highly desirable to properly and equitably distribute taxation and develop the power of the Empire.

SUGGESTIONS FOUNDED ON THE LESSONS.

The war in South Africa is not yet, in December, 1900, fully finished ; more reinforcements are still needed ; there is a large expeditionary force in China, for which this country must pay ; the Navy League are clamouring for an increased Navy, and, if they can truly show that our naval supremacy is in any danger, they must have it ; the income-tax is at a shilling in the pound, with indirect taxation in proportion, and the Chancellor of the Exchequer has told us that we cannot hope for any diminution of taxation from any increased national prosperity ; yet short of compulsory service there is no improvement to be made in our land forces without an increased Army estimate. We are face to face with the alternatives : increased money taxation, or the blood-tax which is borne by the other nations of Europe. Or we can let things drift on in the happy-go-lucky way they have done in the past, and trust that British pluck will as heretofore extricate British stupidity from the difficulties which it has imposed on Empire ! Or cannot we join the Emperor of Russia and the peace societies and go in for general disarmament and the arrival of the millenium ?

The nation has wisely rejected these latter procedures, and has been advised that a voluntary system of enlistment is best, and has approved of that advice. Indeed, no practical measure of conscription has been placed in front of it. Experience has shown that the only really equitable method of compulsory service is one under which every able-bodied man of the nation has to serve ; and this is beyond our requirements. Such a measure would give us in the United Kingdom alone an Army as large as that of France, which has four land frontiers to guard ; and besides giving us too many men and imposing an unnecessary weight on the tax-payer, it does not equitably provide for garrisons over seas or utilise our Colonial forces. Could any means be devised which would fairly limit the numbers ?

If we raise the physical standard with this object in view, we penalise the possession of bodily strength, which is scarcely a way to encourage national development; the blood-tax will be paid by the big men alone, and an adequate compensation for this is not readily obtainable. Suppose we go back to the method of the lot alone, then the moment's luck in the drawing of the number will influence the whole of a man's life, which is to give chance too large a voice in the national welfare. Supposing after the lot-drawing we allow substitution; then we introduce the many evils which have always followed this system; if services are to be paid for, then the nation is a fairer pay-master than the individual.

In any case the man's whole lifetime must be affected by his service, for, in the first place, the actual service must come when a man would be learning his trade or profession, and so would handicap him unduly all through life; again, our experience of this year has shown that it is bad national economy to lose the services of our trained men too early; as a Royal Reserve-man, the soldier is of value to the Empire as long as his vigour is unimpaired, and "once a soldier always a soldier" is a truth which must no more be lost sight of by us than it is by the Germans, or other Continental nations. The limited plan of having conscription only for Home service sees us no further on our way. It does not in peace give us our necessary over-sea garrisons, and in war will do no more for us than the Volunteers whose services for Home Defence it has been said we never ought to require, if the Empire is to exist, as it does at present, wholly by its sea-power.

No, the nation's decision seems to be the wisest and best, if it will follow its decision to its logical conclusion and make up its mind to pay for the luxury of the exemption. Taxation for military purposes can be arranged so as to fall equally on all classes, so that the individual can choose whether he will pay or fight; but those who pay the blood-tax must be fully compensated for their extra liability. No amount of pay per diem can really compensate for loss of life, or limb, or health, or for the hardships of war, but for all these the soldier asks no special compensation. He is carried through this part of his work by patriotism, by excitement, pride in his trade, kudos or glory, or Imperialism, or whatever you may choose to call it, and more especially by what will be said of his actions at home (and this is the real advantage of a territorial system, wherein the soldier knows that all his actions, good or bad, will be reported to his own kindred and his own people); it is not for this that he requires compensation in money—these are incalculable—but *it is* for the daily toil in time of peace which prepares him for these supremest moments. The excellent fighting man who enlists for the love of the fight itself is the last man to patiently labour to make himself fit for the fight. His is a nature craving excitement, and there is none of this in the unremitting labour which alone can make a modern Army fit for the field, and he seeks for that excitement in sports or worse amusements still. He argues that if he is unprepared for the fight, it is his own skin he risks, and he is willing to accept the gamble; but this will not do for the Empire, which wants a highly trained Army fit to do anything and go anywhere. It is to

be remembered that all these arguments apply to the officer equally with the men. The officer who joins the Army with an income of £300 a year or above finds his pay a quite inconsiderable part of his income. He is willing enough to serve and keep up a regimental mess on those means so long as the work is not too hard, and he can get plenty of leave to indulge his sporting instincts, which after all are part and parcel of his love for the fight. Curtail this liberty and he says at once, "Oh! if I have to work I will work at something which will bring me an adequate return for my labour. I can always get up a fight if I want one, and without this grind!"

This state of affairs will not do. We do not want a very large Army, but we do want a very good one. How is it to be obtained? To work from the greater to the less, what probable total number do we require?

In addition to our existing garrisons abroad, which numbered 118,000 men before the war, and which now might be taken as 150,000 as being a more likely total for future Imperial needs, we require in this country four distinct things at least:—

1. We should be able to despatch at once, without calling out the Reserves, and without interfering with our general mobilisation scheme, a division complete in all arms of 10,000 men. These should be always ready to start.
2. On mobilisation, we should be able to despatch, within a month from the receipt of the order, a further 70,000 men, and that without taking any Reservist who had been more than two years from the ranks.
3. In the next three months we should be able to add to this strength a trained and reliable force of 70,000 more, but these may contain a proportion of Militia, Yeomanry, and Volunteers. Thus, with the aid of 50,000 Colonial troops, to be equally ready, we ought, within three months, to be able to put 200,000 really good troops in the field over seas, without weakening garrisons abroad.
4. Behind all this we should have suitable garrisons for our fortresses, a field army for home defence, and means of keeping the forces in the field at war strength; and on an emergency, our own territories being absolutely secure from attack, to be able to again double the field army to make it a recognisable quantity on the Continent of Europe.

The following would be the composition of the field force in units:—

The first force would be an infantry division, but stronger than at present in guns and mounted troops.

The second would be six infantry and one cavalry divisions with details and line of communication troops.

The third would be a similar force, but with similar divisions to the first added respectively from Canada, Australia, and South Africa, with smaller contingents from other Colonies.

Thus the Empire should be able to provide within three months thirteen infantry and two cavalry divisions from home, and details, etc., and four infantry and one cavalry divisions from the Colonies; and behind these an adequate force for home defence capable of even further depletion for service abroad.

No scheme to provide these numbers is really practicable unless it is capable of being evolved from our existing forces. Any utterly revolutionary measure which would quite upset all existing schemes is impossible of acceptance by the English people; evolution is the only possible method of progress.

It has been already explained that to mobilise more rapidly and effectively we require greater decentralisation, that our units to be most efficient must be territorial, and that the higher staffs must work with the units in time of peace.

The following scheme renders this possible without changing the designation or localisation of any infantry unit, or upsetting our general military system.

We require six infantry and one cavalry divisions and details to be despatched within a month of mobilisation; this period might be lessened if the ships could be found; let this be our first care, and on this necessity build up the scheme, bearing in mind the other requirements.

It is suggested that the United Kingdom be divided into seven territorial divisional commands which, as regards recruiting, interior economy, and mobilisation, should be completely decentralised. Although conforming as far as possible to existing districts, yet they must purely appertain to the field and territorial troops, and so be absolutely independent of fortress and coast defence commands. For rapid embarkation they will each be connected with independent ports, round which all their plans for service abroad will centre. These seven places of embarkation will be the Clyde, Mersey, Humber, Thames, Solent, Severn, and Cork Harbour; but Southampton to have the extra strain of the embarkation of the first or independent division, part of the cavalry divisions, and miscellaneous troops of the expedition. The divisions being known as (keeping as much as possible to existing names), the Scottish, North-Western, North-Eastern, Home, Salisbury, Western and Irish, Aldershot keeping the ever-ready infantry division and one cavalry division, and the details; Salisbury to have a cavalry brigade and the Curragh another, and these two places to help with line of communication and other details. To each divisional district would be allotted territorial regiments of cavalry, of field artillery, of field engineers, A.S.C., and R.A.M.C., so that for expeditionary purposes each division would be self-complete, except for what are now known as "corps" details mobilised at the places already given. The boundaries of districts would have to be so extended inwards as to give fairly equal recruiting fields, and in each division would be two territorial brigades involving merely the existing territorial regiments. These brigades might be for instance:—

Scottish Division	-	-	{ Highland Brigade. Border Brigade.
North-Western Division	-	-	{ North-Lancashire Brigade. South-Lancashire Brigade.
North-Eastern Division	-	-	{ Yorkshire Brigade. Northern-Midland Brigade.
Home Division	-	-	{ Eastern Brigade. South-Eastern Brigade.
Salisbury Division	-	-	{ Southern-Midland Brigade. Southern Brigade.
Western Division	-	-	{ Welsh Brigade. South-Western Brigade.
Irish Division	-	-	{ Dublin Brigade. Cork Brigade.

Leaving as unterritorial, and therefore available for general disposition, the Guards' Brigade, and the Rifles to be combined with Guards to form an 8th Division, with Guards, cavalry, and artillery.

It still remains to show how this evolution would fulfil Imperial needs, and to do this one must go into details. Taking the infantry first: The infantry brigades will, with the now existing territorial regiments, cover the districts recruiting about twelve Regular battalions each—of these at least four battalions should always be quartered in the brigade district to work together under the brigadier who will command them in war; this will allow eight battalions for other disposition; of these probably at least four will be serving abroad, leaving four battalions of each brigade to be serving in fortresses at home or in Ireland. The foreign service roster could be worked out either by brigades or divisions; the first battalions for foreign service will always be at war strength with men of full age, and eight of these will be at Aldershot in the ever-ready division; when a battalion goes abroad the next battalion on the roster will be made up to war-strength and so on, the remaining battalions of the brigade supplying drafts to foreign units. On a relieved battalion returning home it will first serve in a fortress, etc., till it becomes 4th or 5th for service, when it will move to the territorial district. Each brigade will require in its own district a separate camp or training ground, and these the country must provide. In the ordinary year's work as soon as a brigade has completed its training it will be joined in its camp by a territorial Militia brigade, bringing it up to the strength of an infantry division, different Militia battalions taking part in these exercises in different years. Mounted troops of the divisional regiments will be detailed to share in these exercises as occasion may require. Similarly, for an August fortnight, one of the Volunteer brigades of the district will replace the Militia, Yeomanry Cavalry and Volunteer Artillery and Engineers replacing the divisional detachments. Then in September will follow the regular divisional exercises, two or more divisions being mobilised against each other. The apparent objection to this scheme, that battalions returning always to the same district will get to know the whole ground, will be removed by these manœuvres which will take place on different frontiers of the districts in different years.

Units will be made up to war strength by calling to the ranks Reservists who have been more than two years from the colours, Reserve officers also serving with the units, and there should be a real test of the district transport and equipment. Thus during the training season the young troops in battalion and brigade training will work over ground familiar to the officers, but for the final exercise the ground will be new to all.

As soon as the manœuvres are over the battalions lying in their own districts will be able to recruit for themselves, and a great effort will be made during the autumn to sweep in as many recruits as possible, so that all can carry out the recruits' training together. The route marches will be made to different recruiting fields of the districts with this object. Meanwhile also the drafts for abroad will be under preparation, and if the men taken as recruits the year before were of full age, enough should be available for two years' service with the complete training of one year as recruits and another as trained soldiers in the ranks.

The other arms will work on similar lines.

The territorial cavalry will contain about four of our existing regiments—one or two will be abroad, one will be serving with the territorial division, and the other with the cavalry brigades at Aldershot, Salisbury, and the Curragh.

The territorial regiment of field artillery will similarly contain about three R.H.A. and twenty R.F.A. batteries and dépôt batteries; of the horse artillery, one battery will be in the district, one abroad, and one with the big cavalry units; of the field there will be about ten abroad, six with the division, and four for general disposal. It is probable that the introduction of Q.F. guns may make it desirable to reduce the number of guns per battery, and consequently increase the number of batteries in a brigade division, but this change would not alter the general arrangement.

Engineers, A.S.C., and R.A.M.C. would be worked on the same general lines. Whether officers would be promoted on one general list or only in the territorial regiments is a separate question, and to be dealt with on its merits in each arm of the Service. For the present it would not seem to be practicable to carry out the foreign service reliefs in any bigger units than at present, but that might come for Indian Service, at any rate. The reason why "army corps" have never been mentioned in the scheme has been shown to be founded on our South African and other war experiences; at any rate, with our present strength they could never work together in peace, have never worked together in war, and so their formation may well be left till the occasion shows the need. But what we now call "corps troops" would be assembled at Aldershot and Salisbury for exercise together and on mobilisation, and for Ireland at the Curragh. Each division would be so far stronger than our present ones in that they would each have a complete regiment of cavalry and a corps of mounted infantry, and one battery R.H.A., and two brigade divisions of field artillery.

So much for peace routine. What would happen in war?

To cover a landing, reinforce an outpost, or to protect an advanced depôt, there will be the ever-ready division at Aldershot to leave (if required, alone, for a small war), or while the remainder were mobilising, its departure not affecting the main scheme at all. Units for this would require to be carefully chosen so that they could put in a complete season at Aldershot before going abroad.

On mobilisation, the territorial divisions fill up to war strength with Reservists under two years away from the colours, and embark automatically and independently as much as possible without troubling Head Quarters; a branch of the Naval Transport Department seeing to the ships at the divisional port of embarkation. As the units of the first territorial divisions leave, so they will be automatically replaced, unit for unit, by the troops for the Reserve Division, which will be mobilised as follows:—

The Reserve territorial brigades will be formed by battalions from fortresses replaced by Militia, and by Militia battalions; the cavalry and artillery will form Reserve regiments and batteries for which the horses and guns will have been provided, and the men mainly coming from the Reserve, but with an addition of surplus men from the Regular units; and for the cavalry some Yeomen, and for the artillery some Volunteers.

These units should be ready for embarkation within three months, being again replaced by fresh units formed from the Royal Reserves, Militia, Yeomanry, and Volunteers, with a percentage of Regular recruits and Reserves.

Let us again see what these numbers mean:—

Abroad in peace	-	-	-	-	-	150,000
Ever-ready division	-	-	-	-	-	10,000
Garrisons of home fortresses	-	-	-	-	-	40,000
First expeditionary force	-	-	-	-	-	100,000
Reserve expeditionary force	-	-	-	-	-	100,000
Royal Reserve expeditionary force	-	-	-	-	-	100,000
Residue at home	-	-	-	-	-	200,000
Total for United Kingdom						700,000

Provided by:—

300,000 Regular troops.
100,000 Reserves under 12 years' service.
25,000 Royal Reserves over 12 years.
125,000 Reliable Militia.
25,000 Yeomanry Cavalry.
25,000 Volunteer Field Artillery fit for service.
200,000 other Volunteers.

Total - 800,000, giving 100,000 spare for contingencies.

It is impossible in a few pages to give all the details of such a scheme as this, and there would always be many discrepancies for which practical working alone could find a solution, but some points not made clear may be further explained.

70,000 men and six infantry divisions were given for each expedition, and seven infantry divisions and 100,000 men have been estimated for; well, the lesser total is the actual fighting strength, and omits details and line of communication troops.

Nothing has been said of the Guards' Division; there would be 10,000 extra in hand for contingencies.

The mounted infantry would be divisional units, organised and formed in the divisional areas.

The cavalry and artillery regiments would have to be most carefully organised, to be capable of expansion by their Reservists to the quadruple strength, and the squadrons and batteries in peace routine would have to be rather above war strength than below it. The Yeomanry require working up to be real Reserve to the one, and the Volunteer Field Artillery to the other; these remarks also apply in their main idea to R.E., A.S.C., and R.A.M.C. units.

Now that the Royal Regiment of Artillery has once been broken up, it seems desirable to take the further step here advocated to admit of the field units being made territorial and more readily organised and mobilised. The coast-defence gunners should be made still more distinct and worked by a separate department at Head Quarters, but coming from them should be units of siege and mountain artillery selected as at present.

A Midland or Northern arsenal would supply stores for the Northern and Irish ports.

Nothing in the above scheme refers to mobilisation for home defence, but all tends to simplify that process rather than complicate it. An efficient Navy should make that always a secondary consideration. Similarly, Sir John Colomb's scheme for the garrisons of the coaling stations would tend to help the general idea.

At present the similarly constituted and formed Colonial forces must depend on the goodwill of the Colonies to fall in with the scheme, and must continue to do so until some measure of federation becomes law.

The staff of the Reserve divisions would be appointed in time of peace from officers serving in the divisional command, and these should hold their appointments during the Militia and other manœuvres, and be prepared to drop into their places on mobilisation, and special service officers will be similarly detailed.

Musketry and artillery practice has not been referred to, but more attention would be paid to them than at present if territorial practice ranges were available, and these would help the training of Militia, Reservists, and Volunteers.

To the Militia more pay and more attention must be given, and they must all be liable for foreign service.

Yeomanry and Volunteers must be distinctly divided regimentally into those willing to serve abroad on active service, and those who are only available for home service. No corps should be allowed to exist which does not provide a certain fixed proportion available for service with an expeditionary force. This means an extra cost again, for these corps will require more encouragement to keep at their proper strength.

It is also to be hoped that this encouragement will bring a higher class into the ranks and more applicants for commissions. An exception to the foreign service rule might be made for Fortress Volunteers, whether artillery, engineers, or infantry.

The scheme does not claim to be an economical one, but the war has already cost £85,000,000, much of which might have been saved had the military forces of the Empire been more trained for their task; the cost of the Napoleonic wars has been already referred to. The greater assurance money brings even in peace some pecuniary return, for trade undoubtedly flourishes better with the greater feeling of security.

A loan would be required for the provision of barracks for the territorial regiments of cavalry and artillery; the enlargement of depôts for the infantry battalions; and for the provision of brigade camps of exercise and of divisional practice grounds; and for new arsenals and increased mobilisation stores. As compared with the before the war estimates of 1899-1900, for the pay of the Army we should want about £3,000,000 extra—for Militia, £400,000; Yeomanry, £100,000; Volunteers, about £500,000; and for the other miscellaneous items about £5,000,000 more, bringing the Estimates up to about £30,000,000; this, with the interest on the loan, would not be more than 15s. per head of the estimated population—a light burden as compared with conscription, and would give us a really efficient Service.

The total *personnel* asked for is scarcely in excess of what we have at present, but from each branch of the Service a higher degree of efficiency is required; if we want a good thing—and we do want a good Army—we must pay for it, and apparently the country is quite willing to do this.

The terms of enlistment do not seem to require alteration, but no recruit should be taken for the Regular Army without a certificate of character and a birth certificate. The first will stop much of the present wastage by desertion, etc., the second will ensure the recruit to be of full age. Both would lessen the number of recruits under the present terms, but the wages must be raised till a sufficient number do come in, for only so can we get an efficient Regular Army. The better class of men will render their obtaining employment as Reservists more simple; and the fact that men, if medically fit, can continue in the Royal Reserve until they earn a pension, will help the soldier all his days.

Has it been made clear that the Royal Reserve would be composed of men who had completed their first twelve years' service, either with the colours or in the Reserve, would be in second line to the ordinary Reserve, and would replace the present Section D? They would re-engage for this service up to fifty years of age on very much the same lines as the reserve now being formed for the Navy and Marines. They would have to go through artillery or musketry practice and manœuvres when called upon. There would thus be four levies of Reserve; first, under two years from the colours; second, remainder of the 1st Reserve; third, Royal Reserve-men under forty years of age; and last, Royal Reserve under fifty; but no Militia Reserve, or rather, all the Militia and part of the Volunteers

and Yeomanry would also be in Reserve for service abroad; the numbers of these and the levies to which they belong being worked out territorially under the G.O.C. the division. If the numbers of the Militia and foreign service Volunteers and Yeomen in any district do not come up to a fair proportion, it is then and then only that conscription should be talked of for that territorial division, or a money fine might be inflicted to pay for extra forces; but it is a practical certainty that local patriotism might always be called on to avoid this slur. The case of the Irish Division is a special one, but judging from the war, the time has arrived or is arriving when Ireland can be treated on the same footing as the rest of the Kingdom, if not, it is a fine training ground for the English units which would be detached there from time to time and which would form the details and line of communication troops of expeditions.

Lastly, we come to the provision of good and well-educated officers. It is quite part and parcel of the scheme that we should have a very large list of Reserve officers of all ranks, and that they shall know exactly in time of peace to which levy and which unit they belong on mobilisation. For the provision of these, the G.O.C. of the territorial division will be responsible, but delegating in some degree the work to officers commanding brigades and regiments; and he will see that there are officers enough for all the units after the Reserve levies' staff and special service officers have been withdrawn. Fortress commandants will have the same responsibility as regards coast-defence commands at home and abroad. To provide these extra numbers there is only the same suggestion as for the men, extra pay according to knowledge and ability in the profession.

Woolwich and Sandhurst will provide as many as they can be rendered capable of, and it would be a distinct improvement if the State could manage to give a free education at these establishments; then to reject all cadets during the courses who do not seem likely to make really hard-working and efficient officers, or at any rate to only give them Reserve commissions. With the free education, this would be no hardship on the idle or backward cadet. In any case, this system will only provide a small proportion of the officers. The remainder, whether for Regulars, Militia, or Reserve (and perhaps for Yeomanry and Volunteers), will be appointed to a territorial regiment by the nomination of its colonel, the G.O.C., or the War Office, but with only medical examination, their general education being certified by Universities and schools. After a recruit's course in the regiment they will go through a garrison class (or War School), of which there will be one in every district and fortress. It is the same localisation and decentralisation idea as for the rest of the scheme. Age of the nominees would be a secondary matter, so long as they were between eighteen and thirty. All the officers, whether from cadet schools, or belonging to Militia and Reserves, will be on the same territorial regimental list and be promoted from the list in turn or by selection, merely being distinguished from one another by the letters on the shoulder—"M" for Militia—"R" for Reserve—and perhaps "V" for Volunteers and "Y" for Yeomanry. At the end of the War School course in military subjects it will be determined by marks given in the

course, by examination at the end, by the wish of the candidate, and by the approval of his colonel, to which branch of the regiment the candidate is posted, *i.e.*, whether active, "M" or "R." All officers will get marks for a gymnastic and riding course; infantry for a school of musketry, artillery for a school of gunnery, and engineers for an engineer school course. After this test promotion examinations should not be required, but on promotion to each successive rank a lack of efficiency as pronounced by a promotion board will cause the officer to pass respectively from the active list of his regiment to the Militia, or from the Militia to the Reserve. This rule will apply equally to the officers from the cadet schools, who do not go through the War School examination. Active officers may be transferred to the Militia, or from the Militia to the Reserve at their own request; conversely, an extra display of zeal in an "M" or "R" officer may cause his selection for promotion to the active list. Efficiency will be judged by the much harder work with their men required of officers under the new system. Non-commissioned officers may be recommended for the War School course, or may, for exceptional services, be promoted without it.

It is a scheme very like the German one, but, for all that, adapted to English ideas, very bad to beat for obtaining a really hard-working class of professional officers. The wealthy man who wishes to serve the State, and would like a little fighting and a little soldiering, but wants a lot of leave and does not like the dull regimental grind, will find what he wants in the Militia and Reserve; and there will not be the same apparent hardship in refusing a step on the active list to an incapable officer, for he will get his step all right on the reserve list, that is, if he is worth even that promotion. Pay and retirement must be graduated in the different classes to suit the market as regards supply and demand.

The Staff College finds the same place in this scheme as in our present one, except that every graduate will know his place on the territorial staff directly after passing, and if it is not an active appointment, will seek to qualify for it while performing his actual regimental duties.

Now to sum up, the advantages claimed for the reform as a whole are:—

1. It provides a real territorial system. Men will always return to their own neighbourhood for their training service, and there will be a real link between the different parts of a division, and with the Militia, Yeomanry, and Volunteers.
2. On general mobilisation for either Service at home or abroad, everything will be decentralised, and Reserves, etc., will find their depôts and mobilisation stores close at hand. Provision is made for the organisation of the whole military resources of the nation to the last man who has handled a rifle in time of peace.

¹ Active commissions would only date from completion of War School course, so as to be fair to cadets.

3. There would be a real and properly graduated system of training from the company to the division, and officers will be able to take a real interest in their men; and having personally taken the unit under their command through at least one year's complete course, can be judged, not by promotion examinations, but by the efficiency of the men they have trained.
4. Territorial brigades and divisions on active service will have a real *esprit de corps* which South African experience has shown can have a great effect on efficiency.
5. Perhaps, most important of all, the higher staffs can work together in peace and prepare quietly and efficiently for their duties in war; and whatever failure there is in their units in war will be mainly due to them, and to them alone, and so the blame for failure can be placed on the right shoulders. From South African experience this is of real and immense importance.
6. The scheme will fit in with any measure of Imperial Federation which may hereafter be passed, and until such a measure is passed there does not seem to be much advantage in devising schemes for Colonial use; we can only set the good example of putting our own house thoroughly in order and ask them to follow the lead.

These, then, are the details and claims of a scheme which essays, however feebly, to remove some apparent defects of our organisation. That it still leaves much to be said must be obvious, since it suggests nothing that will stop the guerilla warfare still raging in South Africa, since it provides no cure for the fact that we are still out-marched by our opponents, that we are still over-matched in strategy by these "simple-minded" farmers. It does not tell in the future how to avoid the enormous outlay incurred in the purchase of 200,000 horses and mules (perhaps the motor-car will help us in this detail); it gives no settled plan for an improved Indian or Colonial Army; above all, it does not lay before a perplexed Chancellor of the Exchequer any system by which our enormous expenditure can be reduced, but rather advocates an increase (income-tax paying officers will regret this equally with civilians). In short, its author feels its shortcomings as much as can any of its critics.

The closest study of the subject has shown no great organiser who was alive to our imperfections before the event; or no great general or statesman at home or abroad who had suggested better plans than ours, or could have provided braver soldiers to carry them out. Still, our errors are glaring now, and it is better for a nation to be wise *after* the event than never to be wise at all! The Empire, and, above all in this matter, the Army, is seeking earnestly to remove such flaws as there are, and from such earnest search (may it long continue earnest!) much good must result. Let us trust that the military lessons of this trying year may serve the Empire in its next great hour of need, and that then there may be the same soundness in the heart of the people and the same

glorious loyalty in the Colonies, and one can only conclude with the motto selected "*Spero meliora.*"

APPENDIX I.

THE FIRST REINFORCEMENTS FROM INDIA.

Name of Unit.	Port of Embarkation.	Date.	Transport.	Arrived.	Date.
5th Dragoon Guards ¹ ...	Bombay ...	26 Sept.	"Lindula"	Durban	12 Oct.
9th Lancers ² ...	Bombay ...	21 Sept.	"Wardha"	Cape	10 Oct.
			"Nowshera"	Cape	11 Oct.
			"Nairnogg"	—	—
19th Hussars ...	Bombay ...	24 Sept.	"Vadala"	Durban	5 Oct.
			"Sirs"	Durban	5 Oct.
			"Warova"	Durban	5 Oct.

Brigade Division R.F.A.

21st R.F.A. ...	Bombay ...	18 Sept.	"Lalpoora"	Durban	2 Oct.
42nd R.F.A. ...	Bombay ...	18 Sept.	"Secundra"	Durban	3 Oct.
53rd R.F.A. ...	Bombay ...	19 Sept.	"Booldana"	Durban	5 Oct.

Infantry Brigade.

1st Devons ...	Bombay ...	21 Sept.	"Sutlej"	Durban	5 Oct.
1st Gloucesters ...	Calcutta ...	25 Sept.	"Indiana"	Durban	15 Oct.
2nd Gordons ...	Bombay ...	24 Sept.	"Palitana"	Durban	7 Oct.
2nd K.R.R. ...	Calcutta ...	18 Sept.	"Purnea"	Durban	5 Oct.

FROM MEDITERRANEAN AND HOME.

Infantry Brigade.

1st Border ...	Malta ...	27 Sept.	"Sumatra"	Durban	25 Oct.
2nd R. Irish Fusiliers ...	Alexandria ..	24 Sept.	"Avoca"	Durban	13 Oct.
2nd Rifle Brigade ...	Crete ...	3 Oct.	"Jelunga"	Durban	26 Oct.
1st Northumberl'd Fus. ³	Southampton	16 Sept.	"Gaul"	Cape	10 Oct.

Brigade Division R.F.A.⁴

18th R.F.A. ...	Birkenhead	26 Sept.	"Zibenghla"	Cape	—
62nd R.F.A. ...	Birkenhead	26 Sept.	"Zayathla"	Cape	25 Oct.
75th R.F.A. ...	Birkenhead	26 Sept.	"Zayathla"	Cape	25 Oct.

REMARKS ON ABOVE TABLE.

¹ Only one squadron of the 5th Dragoon Guards was able to leave at the proper time, the remainder being delayed by an outbreak of anthrax until 8th October.

² The 9th Lancers having reached Durban were sent round to the Cape.

³ The 1st Battalion Northumberland Fusiliers, although taking part in the Salisbury Plain manœuvres and receiving orders at Aldershot, were really on the Foreign establishment, and had only just been brought home to recruit after the fatigues of Omdurman and Crete.

⁴ This brigade division did not have a pleasant trip; the "Zibenghla" was still in the Mersey on 2nd October, having been delayed by defects of machinery and an outbreak of fire in her coal bunkers. The "Zayathla" duly left Birkenhead on the 29th September, but had to put into Queenstown to refit, having leaking boilers, but she left a day or two later. Of course both these ships were carefully inspected by the usual boards of officers both before and after they were fitted as troop-ships. New furnaces had been supplied to each, and they had been pronounced in excellent condition. Eventually they arrived at Cape Town very little overdue, though the fate of the unfortunate gunners was the subject of much discussion at home during the period between their departure and arrival.

The troops from India had sailed complete in transport, equipment, and with field hospitals, bearer companies, and ammunition columns, but no native camp followers were allowed. However, for general supply three Army Service companies, one ordnance company, an ammunition column, and extra horses were sent out from home at the same time.

APPENDIX II.

THE COLONIAL TROOPS.—THE CAPE COLONY.

<i>Name of Corps.</i>	<i>Number.</i>	<i>Name of Corps.</i>	<i>Number.</i>
Cape Colony Volunteers ...	7,000	Cape Mounted Rifles ...	1,000
Cape Town Highlanders ...		Cape Mounted Police ...	2,000
Prince Alfred's Own Artillery ...		Protectorate Regiment ...	500
Cape Garrison Artillery ...		Brabant's Horse ...	1,000
Griqualand West Brigade ...		Kimington's Guides ...	150
Diamond Fields Artillery ...		Nesbitt's Horse ...	500
Kimberley Regiment ...		Bayley's Horse ...	500
Transkei Mounted Rifles ...		South African Light Horse ...	850
Komgha Mounted Rifles ...		Roberts' Horse ...	850
Duke of Edinburgh's Own ...		Kitchener's Horse ...	850
Prince Alfred's Guards ...		Pioneer Railway Corps ...	1,200
First Grahamstown Volunteers ...		Diamond Fields Horse ...	800
Queenstown Volunteer Corps ...		Kimberley Light Horse ...	800
Kaffrarian Rifles ...		Orpen's Horse ...	300
Western Rifles ...		Mafeking Town Guard ...	500
Knysa Rangers ...		Montmorency's Scouts ...	150
Uitenhaga Rifles ...		Yeomanry ...	—
Bechuanaland Rifles ...		Border Levies ...	5,050
	7,000	Ambulance Bearers ...	—
			17,000

Grand Total for Cape Colony ... 24,000.

NATAL FORCES.

Mounted Police ...	649	Natal Volunteers ...	2,000
Imperial Light Horse ...	1,000	Royal Rifles ...	
Imperial Light Infantry ...	1,000	Naval Volunteers ...	
Bethune's Mounted Infantry ...	500	Durban Light Infantry ...	
Thornycroft's Mounted Infantry ...	500	Carbineers ...	
Murray's Horse ...	500	Border Mounted Rifles ...	
Warren's Horse ...	500	Field Artillery ...	
Colonial Scouts ...	500	Mounted Rifles ...	
Ambulance Bearers ...	1,600	Newcastle Rifles ...	
	6,749	Umvoti Rifles ...	
			2,000

Grand Total for Natal ... 8,749.

AUSTRALIAN CONTINGENTS.

First Contingent ..	1,322
Second Contingent ..	1,650
Third Contingent ..	1,369
Imperial Bushmen ...	2,159
Grand Total ...	6,500

NEW ZEALAND, in four contingents and one of Bushmen, sent 1,816.

CANADA.

Infantry ...	1,000
Mounted Infantry ...	727
Brigade Division, Field Artillery ...	537
Rough-riders ...	520
Grand Total ...	2,784

INDIA sent Lumsden's Horse numbering 250 men, and CEYLON added a small contingent 130 strong.

We thus obtain a total from the Colonies of 44,230 men, and nearly 40,000 horses though it should not be forgotten that the expense of the different Imperial Corps fell on the British taxpayer.

APPENDIX III.

Showing approximate positions of troops in South Africa on outbreak of War, 11th October, 1899.

NATAL FORCE.

At Dundee.

1st Leicesters.	18th Hussars.
1st K.R.R.	13th, 67th, and 69th R.F.A.
2nd Dublin Fusiliers.	

At Ladysmith.

1st Liverpool.	5th Lancers.
1st Manchester.	19th Hussars.
1st Devons.	Imperial Light Horse.
1st Gloucesters.	21st, 42nd, and 53rd R.F.A.
2nd Gordons.	10th Mountain Battery.
2nd K.R.R.	Natal Field Battery.

The Natal Police and Local Mounted Corps were distributed along the frontier; the 7th Field Company R.E., 8th Railway Company R.E., and the 23rd Field Company R.E. were distributed in Natal between places and units; there was a squadron of the 5th D.G. at Durban; while the battalions of the R. Irish Fusiliers, Border Regiment, and Rifle Brigade were still at sea. H.M.S. "Powerful" was at Durban.

In Cape Colony.

- 1st Royal Munsters.
- 2nd Berkshire.
- 1st Northumberland Fusiliers.

1st Loyal North Lancashire, half at Kimberley, with the 23rd Company R.G.A., and the 29th Company Fortress R.E. Half the Yorkshire Light Infantry were at De Aar, half were in the "Powerful" at Durban, the 9th Lancers were wandering between the two Colonies; there were further the Cape Colony Corps and Police, another company of Garrison Artillery, while a brigade of Marines and Bluejackets which had been landed had just re-embarked; the 18th, 62nd, and 75th Field Batteries were still at sea. At Mafeking were the Rhodesian forces, and there was another force of police at Tuli.

Not 20,000 men in the whole two Colonies!

APPENDIX IV.

EMBARKATION AND DISPOSITION OF THE 1ST ARMY CORPS.

Name of Unit.	Port of Embarkation.	Date.	Transport.	Arrived.	Date.	Final Disposal.
G.O.C. & Staff ...	Southampton ...	14th Oct.	"Dunotter Castle"	Cape ...	31st Oct.	Natal.
<i>Cavalry Division.—French.</i>						
Staff ...	Southampton ...	20th Sept.	—	—	—	Colesberg District.
<i>1st Brigade.—Babington.</i>						
Staff ...	{ London : R. Albert Dks.	23rd Oct.	—	Cape ...	16th Nov.	To French.
6th Dragoon Gds. {	{ London : R. Albert Dks.	8th Nov.	"Chicago" ...	Cape ...	1st Dec.	" "
10th Hussars ...	{ Liverpool ...	4th Nov.	"City of Persia"	Cape ...	2nd Dec.	" "
	{	8th Nov.	"Ismore" ...	Cape ...		
			"Columbian"	"Ismore" wrecked		
12th Lancers {	{ London : R. Albert Dks.	23rd Oct.	"Mohawk"	Cape ...	16th Nov.	To Methuen.
			"C.of Vienna"			

APPENDIX IV.—*continued.**2nd Brigade—Brabazon, who went to Imperial Yeomanry.*

Name of Unit.	Port of Embarkation.	Date.	Transport.	Arrived.	Date.	Final Disposal.
The Royals	Tilbury	30th Oct.	"Manchester Port"	Cape	22nd Nov.	To Natal.
Scots Greys	Glasgow	5th Nov.	"Ranee"	Cape	5th Dec.	To Methuen.
	Albert Docks	8th Nov.	"Chicago"	Cape	—	
	Southampton	16th Nov.	"British Princess"	Cape	9th Dec.	
Inniskillings	Queenstown	28th Oct.	"Persia"	Broke down	7th Dec.	To French.
		23rd Oct.	"Jamaican"	Cape	18th Nov.	
		24th Oct.	"Siberian"	Cape	20th Nov.	

Brigade Division R.H.A.

R.—R.H.A.	Tilbury	24th Oct.	"America"	Cape	18th Nov.	To French.
O.—R.H.A.	Albert Docks	26th Oct.	"Glengyle"	Cape	20th Nov.	" "

Mounted Infantry.—1st Battalion.

S. District Co.	Southampton	23rd Oct.	"Malta"	Cape	—	—
Aldershot Co.	Southampton	23rd Oct.	"Malta"	Cape	16th Nov.	To French.
S.E. Co.	Southampton	23rd Oct.	"Aurania"	Cape	12th Nov.	—
Cork Co.	—	—	"Aurania"	Cape	12th Nov.	To French.

2nd Battalion.

Northern Co.	Tilbury	24th Oct.	"Orient"	Cape	13th Nov.	To Natal.
Western Co.	Tilbury	24th Oct.	"Orient"	Cape	13th Nov.	" "
Dublin Co.	—	—	"Cephalonia"	Cape	18th Nov.	" "
Eastern Co.	Southampton	25th Oct.	"Cephalonia"	Cape	18th Nov.	" "

*1st Infantry Division—Lord Methuen, who went to Kimberley.**1st Brigade—Colville. The Guards.*

3rd Grenadiers	Gibraltar	26th Oct.	"Goorkha"	—	15th Nov.	To Methuen.
1st Coldstreams	Gibraltar	28th Oct.	"Malta"	—	16th Nov.	" "
2nd Coldstreams	Southampton	21st Oct.	"Gascon"	—	12th Nov.	" "
1st Scots Guards	Southampton	21st Oct.	"Nubia"	—	13th Nov.	" "

2nd Brigade—Hildyard.

2nd Devons	Southampton	20th Oct.	"Manilla"	—	18th Nov.	To Natal.
2nd West Yorks.	Southampton	20th Oct.	"Roslin Castle"	—	12th Nov.	" "
2nd R. W. Surrey	Southampton	20th Oct.	"Yorkshire"	—	14th Nov.	" "
2nd E. Surrey	Southampton	20th Oct.	"Lismore Castle"	—	14th Nov.	" "

Brigade Division R.F.A.

7th, 14th, and 66th R.F.A.	Tilbury	24th Oct.	"Armenian"	—	16th Nov.	To Natal.
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The 14th Hussars, providing the divisional squadrons, sent one squadron to Methuen, the remainder landed at Durban on the 7th January.

*2nd Infantry Division.—Clery, who went to Natal.**3rd Brigade—Highlanders.—Wauchope.*

2nd Black Watch	Tilbury	23rd Oct.	"Orient"	—	11th Nov.	To Methuen.
1st H.L.L.	Southampton	—	"Aurania"	—	11th Nov.	" "
2nd Seaforth	Glasgow	21st Oct.	"Mongolian"	—	18th Nov.	" "
1st A. & S. Highrs.	Queenstown	27th Oct.	"Orcana"	—	17th Nov.	" "

APPENDIX IV.—*continued.**4th Brigade—Rifles.—Lyttelton.*

Name of Unit.	Port of Embarkation.	Date.	Transport.	Arrived.	Date.	Final Disposal.
1st Durham L.I. ...	Southampton ...	24th Oct.	"Cephalonia"	—	23rd Nov.	To Natal.
2nd Cameronianians	Glasgow ...	23rd Oct.	"City of Cambridge"	—	21st Nov.	" "
3rd K.R.R. ...	Queenstown ...	5th Nov.	"Servian" ...	—	30th Nov.	" "
1st Rifle Brigade...	Southampton ...	28th Oct.	"German" ...	—	25th Nov.	" "

Brigade Division.

64th R.F.A. ...	Birkenhead ...	1st Nov.	"Urmston Grange"	—	2nd Dec.	To Natal.
63rd R.F.A. ...	Queenstown ...	6th Nov.	"Isomore" wrecked and guns lost.	—	—	" "
73rd R.F.A. ...	Medway ...	4th Nov.	"Idaho" ...	—	—	" "

*3rd Infantry Division—Gatacre, who went to Stormberg.**5th Brigade.—Irish.—Hart.*

1st Inniskilling Fus.	Queenstown ...	5th Nov.	"Catalonia"	—	5th Dec.	To Natal.
2nd R. Irish Rifles	Queenstown ...	26th Oct.	"Britannic"	—	14th Nov.	To Gatacre.
1st Connaughts ...	Queenstown ...	10th Nov.	"Bavarian" ...	—	8th Dec.	To Natal.
1st R. Dublin Fus.	Queenstown ...	10th Nov.	"Bavarian" ...	—	8th Dec.	" "

6th Brigade.—Fusiliers.—Barton.

2nd R. Irish Fus. ...	Southampton ...	23rd Oct.	"Hawarden Castle"	—	15th Nov.	To Natal.
2nd R. Fus. ...	Southampton ...	22nd Oct.	"Pavonia" ...	—	23rd Nov.	" "
2nd R. Scots. Fus.	Southampton ...	23rd Oct.	"Oriental" ...	—	21st Nov.	" "
1st R. Welsh Fus.	Southampton ...	23rd Oct.	"Oriental" ...	—	21st Nov.	" "

Brigade Division.

77th R.F.A. ...	Liverpool ...	3rd Nov.	"Englishman"	—	30th Nov.	To Gatacre.
74th R.F.A. ...	Liverpool ...	3rd Nov.	"Englishman"	—	30th Nov.	" "
79th R.F.A. ...	Queenstown ...	13th Nov.	"Montfort" ...	—	—	—

Corps Troops.

13th Hussars ...	Liverpool ...	10th Nov.	{ "Templemore" "Montfort" }	{ — — }	5th Dec.	To Natal.
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Brigade Division R.H.A.

P.—R.H.A. G.—R.H.A.	{ Birkenhead ...	30th Oct.	"Pindari" ...	—	25th Nov.	To Methuen.
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Brigade Division R. F. A.

78th R.F.A. ...	R. Albert Docks	13th Nov.	"Sicilian" ...	—	14th Dec.	To Natal.
38th R.F.A. ...	Chatham ...	7th Nov.	"Algeria" ...	—	5th Dec.	To Methuen.
4th R.F.A. ...	Southampton ...	15th Nov.	"Sicilian" ...	—	14th Dec.	To Natal.

Howitzer Brigade Division.

65th R.F.A. ...	R. Albert Docks	12th Nov.	"Canning" ...	—	4th Dec.	To Methuen.
61st R.F.A. ...	Liverpool ...	11th Nov.	"Montfort" ...	—	8th Dec.	To Natal.
37th R.F.A. ...	Southampton ...	15th Nov.	"Antillian" ...	—	—	—
1st Royal Scots ...	Queenstown ...	6th Nov.	"Dictator" ...	—	8th Dec.	To Gatacre.

Similarly the Line of Communication troops were variously distributed, and found themselves at once in the first fighting line. They embarked in ten troop-ships between the 20th October and the 9th November.

OFFICIAL REPORT OF THE RUSSIAN LANDING
PARTIES FROM THE BATTLE-SHIPS
"NAVARIN" AND "SISSOI VELIKI" IN
PEKING FROM THE 18TH (31ST) MAY TO
2ND (15TH) AUGUST, 1900.

*By Lieutenant BARON VON RADEN, Imperial Russian Navy,
Commanding the Detachments.*

Translated from the "Morskói Sbórník," No. 3, March, 1901.

18th (31st) May.—The Russian, French, and Italian landing parties arrived in Tientsin under the command of Colonel Vogak, and having left all our things, at his order, except what was actually carried by the men, in the barge where two sentries were posted, I proceeded to the town where the men had their breakfast. At 3 o'clock on the same day the men were entrained, and Colonel Vogak¹ ordered the contingent to take only what was actually on them, *i.e.*, 60 cartridges each, their bags and intrenching tools, saying that on the morrow he would send reserve ammunition and arms. At 9 o'clock in the evening, after a forced march from the railway station, the contingent arrived at the Russian Legation, where it was met by our Minister and all the members of the Legation. The men were billeted in various rooms that night and patrols and sentries were posted. The contingent had only two changes of linen each and 60 cartridges in their pouches. In the town a numerous crowd of Chinamen accompanied us and stood in lines on either side glaring at us in a most unfriendly manner, but with the exception of individual cries and hisses they showed no specially hostile intention.

19th May (1st June).—The German and Austrian landing parties arrived. Colonel Vogak commissioned Lieutenant Blonsky, who had also left for Tientsin on the 18th (31st) May, to send on our gun with its ammunition and additional rifles. The men were finally quartered in the Legation and made acquainted with its position and surroundings. On going out into the street I was struck by the way in which the Chinese regarded us—not a single friendly look.

20th May (2nd June).—In the morning a cook-house, wash-house, and sleeping boards for the men were constructed. All were in good health. In the evening some of our things we had left behind arrived, but unfortunately not all of them. The gun had not been sent, though its shells had been,

¹ "Wogack" as written in the English newspapers.

and only 3 out of a total of 7 boxes of reserve ammunition for rifles had arrived, and many things belonging to the men had not come, so that they were obliged to borrow from one another.

21st May (3rd June).—News arrived that the enemy was commencing to destroy the railway line and that the station of Huang-tsun, 15 miles from Peking, had been burnt. Reported that a great many Boxers were in the town. In order to make sure of this, I made a tour of the town accompanied by four Cossacks. The crowds looked threateningly at us, and boys cried out from behind corners "Kill," with other insults. Everywhere in the bazaars, in the blacksmith shops, work was going on: pikes and knives were being made and red scarves (the emblem of the Boxers) were being openly sold.

22nd and 23rd May (4th and 5th June) were spent in putting the Legation into a better state of defence. At that time we did not know that we should have to do with soldiers and guns, and, therefore, chief attention was directed towards securing the place against fire, and ladders were ordered to be put up so as to enable the defence to fire at the Boxers from the walls and roof.

24th May (6th June).—The ladders are ready, the men are posted along the walls and on the roof, and, in case of an alarm, the guard is reinforced. In the Legation Street the first barricade is erected in conjunction with the Americans of the adjacent Legation. It consists of wagons, barrels filled with earth, and boxes, etc., while a Colt Q.F. gun is mounted on the flank.

25th May (7th June).—A military council was held amongst the commanding officers of the contingents, and the general wish was to increase the strength of the landing parties; the decision was unanimous and everyone drew up his own plan for the defence of the Legation and endeavoured to make the others agree to it. Reported that incendiarism is general all over the town. All the railway stations are burnt down.

26th May (8th June).—Our Ambassador proceeded with a Cossack guard to the Russian missionary post Beguan; it appears it was still intact, but that crowds of Boxers are collecting round it. The Ambassador brought with him the Archimandrite and the priest and deacon with their servants, and installed them in the Legation. The Government posted 10 soldiers of the Banner Army at the gates of each Legation, armed with spears, but they go away, leaving their spears piled. They are absolutely useless as a guard—almost children, half-starved and in rags. At night Chinese patrols (of the Chinese police) ride round the Legation.

27th May (9th June).—Detachments of General Tung-fu-Siang, recruited in the western provinces, arrived in the town; they are almost exclusively Mussulmans, and the bravest troops, it is said; the infantry are armed with Mauser rifles, the magazines of which are fitted to take ten rounds, and the cavalry have spears and Mannlicher carbines with five rounds in the magazines. Besides these troops it is reported that Yung-lu's forces have arrived; these are European-drilled troops, and

have several guns with them. Until now we had thought that these were meant to suppress the Boxer movement. In the evening the instructor in the Russian language, at the Borodavkin University here, when proceeding on horseback to his university in the Imperial city, came upon a detachment of Tung-fu-Siang's cavalry, some of whom thrashed his horse, and he had to gallop home. Batteries were built on the walls, and the weaker walls were strengthened on the inside by layers of bricks. Our men had now 140 rounds apiece, less than anyone else. Our neighbours, the Americans, who were stationed alongside us at the barricade, had 35,000 rounds, and the Austrians had still more.

28th May (10th June).—A fresh meeting of the officers commanding the contingents took place. It was decided that the English, Russian, and American Legations should comprise one-half of the combined defence, and each should agree to render mutual assistance when subjected to a specially formidable attack, while the Austrian, Italian, French, Japanese, and German, lying on the other side of the Canal, should comprise the other half; at the same time communications were to be kept up between all the Legations. One more European (an English student) was insulted by Chinese soldiers.

29th May (11th June).—Rumoured that reinforcements were to be sent to our assistance. The English summer-houses were burnt down, the racing club and our ecclesiastical mission. The telegraph is interrupted. By order of the Chinese Emperor, a new council of Ministers has been appointed, nearly all of whom are inimical to Europeans, and the chief of whom is Prince Tuan, father of the heir to the throne, and the soul of the Boxer movement. The Japanese interpreter was killed at the Tsing-Ming gates. He was dragged from his carriage and cut to pieces as he was on his way to the station to learn the state of affairs.

30th May (12th June).—Began to build a stone barricade 4 feet high between our Legation and that of the Americans. The Ministers visited our Ambassador, but, it is said, behaved with suspicion. A letter was received from Kalgan from our merchants to say that they were in danger. Telegrams were sent through Kalgan concerning our threatening situation, as well as an express messenger to Tientsin.

31st May (13th June).—Finished the barricade. Positions for firing through loop-holes in the *enceinte* were made all round the Legation. Windows and roofs were barricaded. Provisions were bought in. Fires broke out on the outskirts of the town. The Manchurian city empties and the inhabitants rush out from their homes. Boxer flags are displayed in several houses. The mail is received from Tientsin. We hear that our landing parties are advancing under the command of Admiral Seymour.

1st June (14th).—Searched the houses contiguous to the Legation. The Chinese hurriedly leave. The Catholic mission Nantan is burnt.

2nd June (15th).—Proceeded with 30 sailors and 15 Americans to Nantan to save the Christians, whom the brutes were killing. Over-

took the Boxers on the march, slew 50 and rescued 300 Christians and brought them into the Legation; many of them were terribly mutilated. Nantan itself was entirely sacked and burnt, and heaps of mutilated corpses of women, children, and old men who had not been able to escape were to be met with everywhere. When we defeated the Boxers the Christians who were left alive threw themselves on their knees before us, weeping and showing crosses and trembling with fear; several went mad. We took 10 Boxers prisoners. In the evening an incendiary was captured by the sentry on the bridge over the canal.

3rd June (16th).—The burning of Chinese houses round the Legation began. Great fire in the Chinese city. Went to put out the fires nearest the Legation and ordered the surrounding houses to be knocked down. At night three men of our detachment are stationed in the Russian-Chinese Bank, and the bank clerks keep guard between the bank and the great wall.

4th June (17th).—The captured Boxers were handed over to the Chinese authorities for punishment.

5th June (18th).—The railway line continues to be destroyed. Tchagin's letter received by way of the detachment rejoiced all, but all wonder why the Admiral repairs the road instead of coming straight on here, all the more so as it is known to us through scouts that the road is being again destroyed in his rear.

A third meeting of officers: It is decided that if the Regular troops take part in the attacks against us, all the women and children shall be sent to the British Legation, as being the central one, and the remaining one to be held as the main defence. The Japanese occupy the Fu garden, belonging to one of the Chinese princes; thus the line of defence embraces the English Legation on three sides, so that they only have to defend the northern and a portion of the north-west side, where no serious onslaught can be delivered, owing to the city wall being in the way. The 9th East Siberian Rifle Regiment arrived in the Legation under the command of Staff Captain Vrublevsky. Provisions and stores were taken to the British Legation, where the central store is to be during the siege.

6th June (19th).—The day passed fairly quietly, occasional shots were heard in the city. Received a notification from the Chinese Government to the effect that war having been declared owing to the demand of the admirals that the Taku forts should be delivered up, all Europeans are invited to leave Peking in 24 hours.

At 6 p.m. commenced the first serious attack on all the Legations at once, but it was principally directed against the Russian and American Legations. We answered the enemy's fire, endeavouring to husband our ammunition as much as possible. The firing continued all through the night, and we drove the Chinese from the barricades, when they shut themselves up in the houses and fired through loop-holes made in the walls.

7th June (20th).—The German Minister was murdered and his dragoman wounded. Firing continued with short intervals. We strengthen

the barricade with barrels, bags filled with earth, etc., and make loopholes through.

8th June (21st).—The night passed comparatively quietly. The Chinese barricade the streets and burn the houses. In the morning the Chinese commence a furious fusilade on all sides, and a simultaneous attack on all the Legations was made. At 10 o'clock the Germans, French, Italians, and Austrians retreated to the English Legation, and shortly afterwards the Americans came to our Legation having lost two killed. Then we all retired to the British Legation according to an order from the senior of the commanding officers, the captain of the Austrian cruiser.

On arriving in the British Legation, I at once saw that complete chaos reigned there, therefore immediately rushed back with my men, and, after beating off the Chinese, let the Americans pass through, who then cleared their Legation, after which they went out on the wall, and having entrenched themselves, took possession of the entrance, and we sent ten men to their assistance.

9th June (22nd).—Up to mid-day there was furious firing. The Dutch Legation was burnt down and looted. From 2 p.m. until the evening firing ceased, but with the approach of darkness it recommenced.

10th and 11th June (23rd and 24th).—Firing continued; the hospital is quickly filling up, and two doctors can hardly get through the work.

12th June (25th).—Firing continued all night. At 12 o'clock noon the Chinese broke into the Russian-Chinese Bank and set fire to it, keeping up a hot fusilade from all sides, so that it was impossible to put the fire out.

13th June (26th).—We made a sortie and killed about 20 of the enemy. One sailor belonging to the "Sissoi Veliki" was wounded. In order to have some kind of leadership over all the landing parties, and in view of the incapacity of the Austrian commander for such a post, all the commanding officers of the contingents agreed to appoint the English Minister, Sir Claude Macdonald, to take over the command. This was very unpleasant, but, as the necessity was apparent, I agreed to it. I must, however, say that with the exception of requests concerning reinforcements, I received no single order from him and all my reports were approved by him.

14th June (27th).—A desperate attack was made on the Fu garden occupied by the Japanese. We sent 10 men to their aid, the British 15, and the remaining nationalities 10 men each. These made a counter-attack on the Chinese, when a bluejacket belonging to the "Navarin" was wounded. Another sailor from the "Sissoi Veliki" was wounded about 4 p.m. Both were taken to the British hospital.

15th June (28th).—A petty officer and sailor wounded.

16th June (29th).—At night, besides musketry fire, a heavy cannonade commenced, the guns used being 37-millimetre $3\frac{1}{2}$ -inch modern Krupps, but the enemy's aim was very bad, the shrapnel bursting either beyond or far short of the Legations, while the common shell fell into the

Chinese quarter. During the night the Chinese erected a strong barricade opposite the Dutch Legation right across the road, threatening us.

At 9 a.m., a sailor belonging to the "Sissoi Veliki" was killed, and shortly afterwards another was wounded.

17th June (30th).—Strengthened existing and erected fresh barricades.

19th June (2nd July).—The Chinese build barricades and trenches, drawing nearer to our bastion on the wall. They have approached now to within 35 paces and in two nights have erected a powerful bastion. It has been decided to attack this at night, and after we have taken it to entrench ourselves in it. To effect this, 15 Russians, 10 British, and 25 Americans proceeded at 12 o'clock at night to the wall.

20th June (3rd July).—At 2 o'clock in the morning, under the command of Captain Myers, an American, the Russians, English, and Americans delivered the attack and drove the Chinese out of their bastion. The Russians and Americans attacked from the front and came under a furious fire, but the English turned the enemy's flank and put them to rout. Two Americans were killed and their captain wounded, and two bluejackets, one from the "Sissoi Veliki" and the other from the "Navarin," were wounded. Staff Captain Vrublevsky led the Russians, and was the first to leap on to the bastion. The Chinese made a desperate attempt to re-take the position, but were repulsed. More than 50 Chinese were killed, about 30 of them lying behind the wall of our barricade. Two sailors were wounded, one belonging to the "Sissoi Veliki," and the other to the "Navarin."

21st June (4th July).—Bombardment of all the Legations, the Chinese using 37-millimetre guns, but doing little harm. We greatly feel the want of guns, rifle fire being insufficient to prevent the building of barricades.

22nd June (5th July).—The enemy's guns do a little damage to the Legations.

25th June (8th July).—A vigorous attack was made by the enemy from the Mongol Square, who bombarded both the Russian and British Legations. The Chinese surround us now with a 5-deep ring of barricades. We have now learnt to fire remarkably accurately, some being especially good shots. During the day the Chinese do not dare show themselves over the barricades. We kill every day from 10 to 15 of them, so now they are making their barricades higher and stronger, but by so doing they deprive themselves of the possibility of attacking us; but for all that we are closely besieged.

In the English Legation an old M.L. Chinese gun has been found, and we have handed over our artillery ammunition, the shells fitting the calibre.

26th June (9th July).—Rifle and artillery fire all night. In the morning the wall was found to have been broken in the corner of the Legation opposite the stables. It was evident that the Chinese were collecting, either to make an attack at this point or to try and set fire to the Legation through the hole in the wall. We at once blocked up the

breach, and made a barricade facing the wall with two tiers of loop-holes (for firing standing and kneeling). We also loop-holed the stables and bath-house which command this danger corner, so that this weak spot is now exposed to a cross fire as well as to frontal fire. We also cleared the ground and laid bare the whole length of wall from end to end.

At 8 p.m. the German and French Legations were heavily bombarded. Shrapnel burst continuously but did no harm.

27th June (10th July).—Suffering from want of ammunition, we manage to manufacture cartridges and powder which are sufficiently effective at close ranges. The stench from dead bodies is awful. Firing all night; the enemy's bullets finding their way in through our loop-holes, which have to be stopped up.

28th June (11th July).—The German Legation considerably battered by artillery fire.

29th June (12th July).—The night passed wonderfully quietly; in the afternoon the artillery began to shell us, but we had no casualties. Our crews, consisting of 1899 or 1898 recruits, for the most part have developed into veterans and are making marvellous shooting. The Chinese stand in awe of us and daily lose some of their most daring soldiers.

30th June (13th July).—At night occasional artillery fire and a dropping fusillade. In the morning the cannonade becomes heavier and shells from the tower of the Tsing-Ming gates begin to burst over our Legation and drop in the houses. One shell struck the roof of the bell-tower, shrapnel fell in the court, and a common shell pierced the roof of the building where the Cossacks are quartered and exploded inside, but no one was killed. In the British Legation the women and children are taking refuge in bomb-proof chambers underground. Three shells have fallen into the bell-tower and four into the Minister's house, breaking everything in the room.

At 6.35 in the evening a general attack was made on all the Legations. The enemy endeavoured to rush us from behind the stables, and were driven back, but they broke down part of the wall. At 6.40 p.m. a tremendous explosion was heard in the French Legation and one of the houses was blown up, two Frenchmen and twenty-two Chinese being killed. The Chinese rushed to the attack, but the French drove them back; their Legation however caught fire. At the same time the Germans were attacked, and in answer to their request we sent 10 men to their assistance. Both the Germans and French lose many men from not having constructed barricades and trenches. Our 10 men built in one night a barricade and showed the Germans how to make use of it. At 8 p.m. a desperate attack was made on our Legation, the Chinese crawling up; they were beaten back and commenced a terrific rifle fire.

1st July (14th).—They are using all kinds of shells, round and conical, apparently ammunition is failing them. Some of their shells are filled with lime and they are even firing copper money at us. At 12 o'clock the 10 men we lent to the Germans returned. The enemy

are firing very wide. The remainder of the day is comparatively quiet and we are enabled to strengthen our barricades and make good any damage done. The Russian ladies help the wounded, the wife of our Minister being especially active. In the evening the Chinese tried to erect a barricade still closer into us, but having lost three or four men have abandoned the effort.

2nd July (15th).—We made a sortie to level some burning houses close to our Legation, thereby increasing our field of fire and hindering the Chinese from creeping up to us under cover of night. The Chinese opened a heavy fire on us as we were performing this duty, but our operations were covered by some of the men of our detachment, who fired from the upper loop-holes and kept the fire of the Chinese under. Found the commencement of a Chinese sap, but now that the ground around is laid bare they will be unable to go on with it.

3rd July (16th).—The Austrians and Italians leave their Legations, the first go over to the French, the latter to the Japanese. Rockets are fired into our Legation at night and combustible materials are thrown over the wall, but we have long since cleared everything away that is likely to catch fire. Fearing that the enemy may push a sap under the stables, we dig a deep counter-sap.

4th July (17th).—Continued to dig the trench behind the stables. In view of bad weather, erected barracks at the barricade for the men, and also stone protection from ricochet bullets coming from the Japanese, French, and German Legations. The Chinese again continue to erect a barricade thirty paces from us, and dig trenches. Requested the English to lend us the old Chinese gun, and having made a breach in the wall near the barricade we fired six shots at the Chinese building the barricade. This was sufficient to make them stop work, but at night they managed to finish it. The reason that they are so persevering in such work is the fact that the work is done *not* by the soldiers but by coolies, who are forced to work under fire by the soldiers, who kill them in case of refusal. The Chinese approach the British Legation under a flag of truce and ask for a cessation of military operations. Firing ceases.

5th July (18th).—In the night the Chinese finished the new barricade, and we have to be now more careful how we show ourselves, and must build our barricade higher.

A letter is received in the British Legation from the Yamen to the effect that the Chinese have ordered all firing to be discontinued. We promise to do the same. At 10.30 the Chinese began to show themselves without fear on the barricades waving white flags. They even approach the Legations, but are not allowed to come too near. We display boards with the following notice in Chinese:—"Do not approach with arms, and build no new barricades, or we shall fire." The Chinese are allowed to collect their dead, but not to take away the rifles and ammunition from their bodies.

I cannot speak too highly of our sailors, their conduct is splendid and wins the admiration of the foreigners.

In spite of the armistice the Chinese secretly work on their barricades, and in the evening we raise ours, laying bags filled with sand on the top, since stones made a noise and attract the attention of the enemy, and draw their fire.

7th July (20th).—The night passed quietly. In the morning the Chinese began to dig in front of our left flank. We fired in the air to stop them, but as they continued to go on with the work we fired ball cartridge at them, whereupon the workmen fled. Spent the remainder of the day in disinfecting and cleaning the place, throwing down lime and carbolic. In the evening the Chinese start making their barricade higher, so we are driven to do the same.

8th July (21st).—The day passed quietly, so we availed ourselves of the opportunity to finish our trench behind the stables and to strengthen our barricades.

9th and 10th July (22nd and 23rd).—Heavy firing to the N.W., the Catholic Mission Batán is evidently being attacked; its garrison consists of 30 French and 10 Italians.

12th July (25th).—At 2 o'clock in the night the Chinese attacked us on all sides, but after receiving several volleys, they retreated behind their barricades, whence they kept up a rifle fire all night and into the morning.

13th July (26th).—Our barricade in the Legation Street has now developed into a regular fort, capable of withstanding even small-calibre artillery fire. It is called "Fort Navarino-Sissoisky," and carries the national flag. In the evening the Chinese fire war-rockets at our barricade and Legation, but without doing any harm. The *façades* of the houses in Legation Street, facing the Chinese barricades, have been beaten by thousands of bullets, all the trees are also knocked about and are beginning to wither. At 2 o'clock at night an attack was made from the Mongol market, but was repulsed. Provisions are very scarce; we receive half a loaf of bread, rice of second quality, and very often bad horse-flesh. We have begun to make gruel of barley.

15th July (28th).—At night there was firing from all the Chinese positions.

16th July (29th).—Heavy firing, both musketry and artillery, from the N.W. At 4 a.m. the fire on our Legation grew in intensity. It is pleasant to note that under this fire we are losing fewer men than the others, owing, no doubt, to our incessant work in strengthening our line of defence.

17th July (30th).—Heavy firing was audible from the direction of Batán. In the morning we were fired at from the roofs of houses and from behind barricades. Finished erecting a barricade in the courtyard, built another in the Russo-Chinese Bank, fearing a surrounding movement at night. We keep three sentries in the Russo-Chinese Bank day and night; the Americans also help, they are our neighbours, and the wall of the bank bounds their Legation.

18th July (31st).—Firing on our Legation commenced at 8 o'clock in the morning and continued till the evening. Through spies we learn that 7,000 soldiers and Boxers have entered the city. The whole day we await an attack. In the evening the Chinese increase their fire and approach close enough to the Legation to throw stones over the wall, but on losing several men they retire. In the night 10 men are sent to the English at the request of the British Minister.

19th July (1st August).—Firing continued all night. Several of the crews are ill with dysentery and are excused guard, but sleep with loaded rifles. We continue to manufacture cartridges.

20th July (2nd August).—Firing at night from the Mongol market, but no attack took place and no artillery fire. Towards evening there was furious firing, but it quickly ceased, and after that there were only occasional shots. During the siege a great many of our Christian coolies were killed by the Chinese, about one hundred of those who had helped to build barricades for the Japanese and English being shot.

21st July (3rd August).—Occasional firing throughout the night; the day passed fairly quietly. Reported from our advanced post that behind the third barricade many Chinese soldiers were to be seen dragging along provisions, bags, and boxes, probably containing military stores. We at once opened fire on them, killed 10, the rest fled. The Chinese concentrated their fire from barricades and roofs. Our provisions are getting worse; the horses are ill and skinny, and the rice is damaged; there is no wine left; three pieces of sugar are portioned out to each man a day; there are no potatoes, etc. So far there is no suffering from thirst; the men are worn out, as they get no sleep, and their nerves are strained by continual alarms. Besides this the fleas, gnats, and midges torment dreadfully, and together with the heat, render it impossible to sleep, even when there do happen to be a few quiet moments. Despatches from the Chinese have been received by the Ministers, requesting us to leave Peking, but this proposal is, of course, made with the object of giving the Boxers an opportunity of cutting us to pieces directly we quit our strong positions. We refused, therefore, to go. During the day we killed several Chinese.

22nd July (4th August).—The night was comparatively quiet, excepting a few shots from the Mongol market and from the wall. We cannot pass through any messengers, as they fall into the hands of the Chinese; we let some down by means of a rope from the wall, but we saw one cut down in the Chinese city. While working on a barricade in the Russo-Chinese Bank a bluejacket belonging to the "Navarin" was mortally wounded, and one from the "Sissoi Veliki" was slightly wounded, but was able to remain on duty; the other one died. Heavy firing at night.

23rd July (5th August).—The day passed with a slight fusillade on both sides, in which the Chinese lost 15 men.

24th July (6th August).—At 3 o'clock in the morning the Chinese endeavoured to carry the Legations by storm, but were repulsed with loss. The men are becoming quite worn out, they fall asleep at their

posts and suffer from stomachic complaints. It is very hard work to keep constantly going the rounds; the Cossacks are very good, especially one, who fires almost continuously and has killed a great many of the Chinese soldiers. What with the killed, wounded, and sick, our effective strength is sadly diminished. In order to deceive the Chinese we post men in positions in the day-time where they can fire on the enemy, but withdraw them at night.

25th July (7th August).—Continuous fire from the barricades. The Chinese aim very high.

26th and 27th July (8th and 9th August).—Heavy rifle firing. We expect and prepare for an attack.

28th July (10th August).—The Chinese leaders try to persuade the soldiers to rush us, but only a few answer to the call, and they are instantly shot down as soon as they show themselves. Quiet towards evening.

29th July (11th August).—Attack on the Japanese, who repulsed it brilliantly. A sailor from the "Sissoi Veliki" died of dysentery. Cannonade at night from the Mongol square, the wall, and from the Xataminsky gates.

30th July (12th August).—A sailor from "Sissoi Veliki" wounded by fragment of a shell. Three more men sent to hospital for dysentery. Heavy firing all day. Provisions are giving out, only a few horses being left. The Chinese Christians have for a long time been eating dogs and grass. Bombardment from all sides at night.

31st July (13th August).—All night and day the Chinese continue the firing. At 8 o'clock in the evening the Chinese tried to deliver an assault from the street, but we drove them back with 11 volleys. Their loss should be heavy. The British also repulsed the enemy, as the attack came from the Mongol square, and we helped them by firing on the Chinese flank. The Chinese are said to have suffered heavily. We have only some cases of contusions from splinters.

1st August (14th).—A sailor from the "Sissoi Veliki" died, and another from the same ship was wounded and taken to hospital. During the night the firing was heavier than usual. The bullets came down like hail. At 2 o'clock at night Q.F. guns and musketry volleys were heard outside the city. We at once understood that the hour of our deliverance was at hand. It was our men threatening the Chinese from the east side. In the morning the bombardment of the gates commenced and the first to enter Peking were Russian troops. At the same moment our garrison and the American on the wall made a sortie under the command of Midshipman Den, and having captured all the Chinese fortifications penetrated to the Tsing-Ming gates, through which the Americans went while the Russian contingent proceeded further than Tsing-Ming and captured 5 Chinese guns and 10 standards.

At 3 o'clock the Manchu city was occupied by the European forces. The final losses of the Russian landing party were:—4 sailors killed, 2 died from dysentery, 18 wounded, 6 of whom remained in the ranks and

5 returned to duty during the siege, of the remainder 3 were seriously wounded.

On the 7th (20th) August, 7 wounded and 4 sick with dysentery were sent to the brigade hospital to be forwarded on to Tientsin.

The losses of the other landing parties were as follows :—

The total strength of all the landing parties was 21 officers and 429 men, of whom 78 were killed and 179 wounded.

Germans.—Landing party consisted of 1 officer and 50 men, of whom 13 were killed and 16 wounded; of the Volunteers, 1 was killed and 1 wounded.

British.—Landing party, 3 officers and 79 men; killed (with Volunteers), 6; wounded, 26; 3 Volunteers killed and 6 wounded.

French.—Landing party, 3 officers and 45 men; killed (with Volunteers), 13; and wounded, 12; 2 Volunteers killed and 6 wounded.

Japanese.—Landing party, 1 officer and 24 men and 36 Volunteers; killed (counting Volunteers), 10; wounded, 29; 5 Volunteers killed and 8 wounded.

Americans.—Landing party, 3 officers and 53 men; 7 killed and 11 wounded.

Austrians.—Landing party, 5 officers and 30 men; 4 killed and 11 wounded.

Italians.—Landing party, 1 officer and 28 men; 7 killed and 13 wounded.

Besides these, in the Catholic Mission Pehtang there was a garrison of 30 French with an officer, and 11 Italians with an officer, of whom 5 French were killed and 8 wounded, while the Italians lost 6 killed and 4 wounded.

The loss in officers killed and wounded was :—

Americans—Wounded, 1 officer.

English—2 wounded, 1 killed.

French—2 killed.

Italians—1 wounded.

Austrians—3 wounded, 1 killed.

The losses of the Russian landing party of 2 officers and 72 men were as follows :—

Killed, 4 men; wounded, 1 officer and 18 men.

In conclusion, I consider it my duty to state that the successful defence of the Legation against such a host of enemies was only made possible by the co-operation of such able assistants as Midshipman Den and Staff Captain Vrublevsky. Their bravery, coolness, and devotion to duty were beyond all praise. The behaviour of the men was equally praiseworthy, and by their courage and endurance won the respect of the representatives of all the nations in Peking.

BARON VON RADEN,

Lieutenant, Imperial Russian Navy.

NAVAL NOTES.

HOME.—The following are the principal appointments which have been made :—
Captains—The Hon. H. Lambton, C.B., to "Victoria and Albert"; E. E. Bradford to "Majestic"; G. H. Hewett to "Magdala"; J. L. Burr, C.M.G., to command of Fleet Reserve at Portsmouth. Commanders—S. E. Erskine to "Alacrity"; H. V. Elliott to "Beagle"; C. Keighley-Peach to "Minotaur"; E. F. Inglefield to "Achilles"; S. H. B. Ash to "Barracouta."

Vice-Admiral Sir H. Rawson, K.C.B., struck his flag on board the "Majestic" at sunset on the 17th ult., and Rear-Admiral A. K. Wilson, C.B., V.C., hoisted his on board the "Majestic" the same evening in command of the Channel Squadron.

On 1st April, Captain the Hon. H. Lambton succeeded Vice-Admiral Sir J. Fullerton, G.C.V.O., in command of the Royal Yacht. The armoured cruiser "Undaunted" arrived at Plymouth from China on the 1st ult., and paid off on the 25th ult. at Devonport. On the 10th ult. the second-class cruiser "Talbot" commissioned at Devonport for service in China and left for her station on the 29th ult. The second-class battle-ship "Alexandra" paid off at Chatham on the 16th ult., and her officers and men commissioned the first-class battle-ship "Revenge" on the 17th at the same port as flag-ship of the Reserve Squadron. On the 23rd ult. the third-class cruiser "Perseus" left Sheerness for the East Indies to relieve the third-class cruiser "Racon": on the same day the first-class gun-boat "Pheasant" arrived at Plymouth from the Pacific. On the 16th ult. the old armoured ship "Achilles" was commissioned at Portsmouth to relieve the "Hibernia" as receiving-ship at Malta and left on the 26th ult. for her destination. On the 25th ult. the third-class cruiser "Mohawk" paid off at Chatham.

Steam Trials.—The new first-class battle-ship "Implacable" has successfully completed her trials. At her 30 hours' trial, at 12,000 I.H.P., the following were the mean results :—Steam in boilers, 260 lbs.; steam at engines, 233 lbs.; vacuum, 28.1 inches; revolutions, starboard 100.8, port 99.3; pressure in cylinders :—high pressure, starboard 89.35 lbs., port 92.3 lbs.; intermediate, starboard 36.3 lbs., port 34.6 lbs.; low, starboard 14.8 lbs., port 16.1 lbs.; I.H.P. :—high-pressure cylinders, starboard 1,811, port 1,840; intermediate, starboard 1,968, port 1,844; low, starboard 2,123, port 2,271—total, starboard 5,902, port 5,955—gross total, 11,857; coal consumption, 1.65 lbs. per I.H.P. per hour; speed, 16.75 knots.

The full-power trial was equally successful. Her engines are nominally of 15,000 I.H.P.; but in her trial she worked up to an average of 15,244 I.H.P., and developed a mean speed of 18.22 knots, with a coal consumption of 1.88 lbs. per I.H.P. per hour. The mean results are as follows :—Steam at boilers, starboard 270 lbs., port 270 lbs.; steam at engines, starboard 243 lbs., port 242 lbs.; vacuum, starboard 27 inches, port 27 inches; revolutions, starboard 109.1, port 108; pressure at cylinders :—high-pressure, starboard 101.8, port 101.8; intermediate, starboard 43.7, port 39.5; low, starboard 18.7 lbs., port 19.1 lbs.; I.H.P. :—high-pressure cylinders, starboard 2,230, port 2,273; intermediate, starboard 2,552, port 2,289; low, starboard 2,914, port, 2,986—total, starboard 7,696, port 7,548—gross total, 15,244.

The new first-class battle-ship "Albion" has also completed her trials. During the 30 hours' run at three-fifths power the machinery and boilers worked smoothly,

there being no incident of any kind. The boilers provided a continuous and sufficient supply of steam under natural-draught conditions, no fans, air-blowers, or other means being used for the purpose of assisting combustion. The contract power under these conditions was 10,250-I.H.P. The actual mean results of the 30 hours' steaming were ascertained at the end of the trial to be 10,809-I.H.P. The speed of the vessel was 16·8 knots. The mean results for 30 hours were as follows :—Steam pressure at boilers, 224 lbs. per square inch ; steam pressure at engines, 199 lbs. per square inch ; revolutions per minute, starboard 102·6 ; revolutions per minute, port 101·8 ; vacuum in condensers, starboard 27·7 ; vacuum in condensers, port 27 ; I.H.P., starboard 5,294 ; port 5,515—mean total I.H.P. for 30 hours, 10,809 ; consumption of coal for all purposes, 1·8 lbs. per I.H.P. per hour. The engines are of the usual vertical triple-expansion type, steam being supplied by 20 Belleville boilers, arranged in three stoke-holds.

The full-speed trial was equally satisfactory. The terms of the contract stipulated that a mean I.H.P. of not less than 13,500 was to be developed during a trial of eight hours' duration. The actual mean results ascertained at the termination of the trial were as follows :—Mean steam pressure in boilers, 258 lbs. per square inch ; mean steam pressure at engines, 226·5 lbs. ; mean vacuum in condensers, 27·3 ; mean total I.H.P., 13,885 ; coal consumption, 1·9 lbs. per I.H.P. per hour ; speed of ship by log, 17·8 knots. The trial was made under natural-draught conditions, there being no air pressure in the stoke-holds. The engines and boilers worked smoothly throughout the trial. At the conclusion of the full-speed run, satisfactory trials were made to test the steering gear and also for starting and stopping the main engines.

The "Kangaroo," the twelfth 30-knot torpedo-boat destroyer, built by Palmer's Ship-building Company, Jarrow-on-Tyne, has had a satisfactory 3 hours' full-power coal consumption trial. She developed 6,477-I.H.P., which gave her 379·85 revolutions, and the speed was 30·184 knots. The air pressure was 2·8 inches. During the 3 hours she made 6 runs over the measured mile in Stokes Bay, when the speed, with 6,507-I.H.P., and 2·6 inches of air pressure, was 30·031 knots. The coal consumption has not yet been ascertained.

The Naval Strength of the Powers.—A Parliamentary paper has just been issued showing the fleets of Great Britain, France, Russia, Germany, Italy, United States of America, and Japan, distinguishing—battle-ships, built and building ; cruisers, built and building ; coast-defence vessels, built and building ; torpedo-vessels, torpedo-boat destroyers, and torpedo-boats, built and building. The return also shows the date of launch, displacement, and armaments reduced to one common scale. The last time the return was issued was in January, 1900. Vessels which appeared on 15th January, 1901, in the official list of each Navy as built or building are enumerated, there being included under the latter head those for which on that date money had been appropriated, and which were shortly to be laid down. The following tables exhibit the total number of vessels in each class belonging to each nation :—

Vessels Built.

	Great Britain	France	Russia	Germany	Italy	United States	Japan
Battle-ships	50	28	15	19	15	7	16
Cruisers, armoured	9	7	11	4	5	2	6
" protected	103	38	3	15	16	14	14
" unprotected	11	7	3	20	—	6	9
Coast-defence vessels, armoured	10	14	14	11	—	15	4
Special vessels	2	1	5	3	—	1	1
Torpedo-vessels	35	15	17	2	14	—	1
Torpedo-boat destroyers	89	9	10	12	3	3	11
Torpedo-boats	95	235	171	140	143	20	33
Submarine-boats	—	4	—	—	—	1	—

Vessels Building.

	Great Britain	France	Russia	Germany	Italy	United States	Japan
Battle-ships	16	5	10	10	6	11	1
Cruisers, armoured	20	15	1	3	1	9	1
" protected	4	2	11	7	—	6	3
" unprotected	—	—	—	—	—	—	—
Coast-defence vessels, armoured	—	—	1	—	—	4	—
Special vessels	—	—	2	—	—	—	—
Torpedo-vessels	—	—	—	—	—	—	—
Torpedo-boat destroyers	24	14	43	15	8	17	8
Torpedo-boats	4	44	24	—	—	12	36
Submarine boats	—	12	—	—	—	7	—

Description of the new Vickers-Maxim 7.5-inch Quick-Firing Gun.—The following description with the accompanying plans have been kindly furnished us by Messrs. Vickers-Maxim & Co. :—

The gun is of steel and wire construction. It is 50 calibres long in the bore, the total length from the breech face to the muzzle being 386.7 inches. It is constructed with an outer tube extending the whole length of the gun, into which a tapered liner is driven and held in position by a bush screwed into the breech end of the gun, and in this the breech plug of the mechanism is screwed. Wire is tightly wound round the outer tube, the tension varying in successive layers, according to the method usual in the manufacture of these guns.

The wire extends over the chamber and that portion of the bore where the highest pressures are experienced. The wire is then covered by a steel jacket, on which are formed two keys which prevent the rotation of the gun, due to the re-action as the shell is turning in the rifled bore. The jacket is connected to the outer tube by a shoulder and a screwed collar with shoulders. On to the jacket is screwed a ring provided with arms for connecting the recoil cylinder.

The chamber of this gun is made exceptionally large and is designed to stand erosion caused by the employment of large cordite charges.

The chief advantages of this design of gun are :—

That the gun only consists of four distinct parts, including the breech ring, and that the great thickness of the outer tube, which extends the whole length of the gun, ensures great girder strength, and the tendency to bend, that some designs of guns have shown, is entirely obviated.

With 92.6 lbs. of nitro-cellulose for a charge, and using 200-lb. shot, a muzzle velocity of 2,920 feet per second, and a muzzle energy of 11,825 foot-tons can be obtained.

Description of Breech Mechanism. Hand Lever Type.—The breech mechanism for the 7.5-inch gun is a new design of single motion type, i.e., the breech is opened or closed by the single motion of a hand lever. In this design of breech mechanism the horizontal swing of the hand lever rotates (locks or unlocks) the breech plug, swings it in or out of the gun, and "cocks" the firing striker.

The firing gear is arranged for firing by electricity or percussion, and is directly operated by the hand lever, so that the gun is absolutely safe before the breech commences to open. The breech plug is of special design and is mounted and free to turn on an arm or carrier pivoted at the right-hand side of the breech.

The threaded portion of the breech plug is divided into segmental portions of varying radii. In the case of the 7.5-inch breech plug there are nine segments and six of these are threaded, i.e., two-thirds of the circumference is used for resisting the strains when firing; this enables a very short breech plug to be employed. Owing to the shortness of the breech plug it can be swung clear of the breech after unlocking

without any curvature and without unusual longitudinal withdrawal, and this is done with the De Bange obturator in the mechanism described. The arrangement for actuating the breech plug is very simple, and consists of a link, one end of which is pivoted on a pin projecting from the end of the breech plug; the other end is pivoted to a short crank which is mounted on the breech plug carrier. Around the boss of the hand lever which is pivoted on the carrier is a "skew gear" wheel which gears with "skew" teeth formed on the boss of the short crank.

The hand lever lies close up to the gun and the centres of the link and crank are arranged to form a locking point when the breech is closed. This arrangement of link and crank provides great power when opening or closing the breech.

The firing gear is arranged to fire either by electricity or percussion. For this purpose a nut is fitted on the end of the obturating bolt. In this nut a vertical slide which covers the end of the firing primer is worked by means of two spring bolts. One of these bolts engages with a cam on the hand lever, the other in a groove in the link of the breech mechanism. An ejector, actuated by the movement of the slide, is fitted in the nut. A spring retaining catch is fitted in the obturator bolt, having a lip which prevents the tube from being jerked out, however violently the mechanism may be closed.

The action is as follows: When the lever on the breech mechanism is swung away from the gun by means of the cam it forces the slide downwards in the nut. As the lever continues to swing away from the gun, it eventually loses its connection with the spring bolt of the slide, and the downward movement of the slide is continued by the movement of the link which actuates the other spring bolt, and keeps the slide in the correct relative position until the breech is closed. When the slide has been moved down far enough it actuates the ejector, thus jerking out the firing tube.

Previous to ejecting the tube, the retaining catch is automatically lifted by the ejector so as to allow a free passage. On the first movement of the slide downwards and before the breech has been unlocked, the firing needle is automatically cocked by means of the toe with which it is provided engaging with a quick incline on the rear of the firing gear nut. The spring bolts are arranged so that in the case of miss-fire the slide may be pulled down by hand to a certain extent, sufficient to eject the tube without its being necessary to open the breech.

Centre Pivot Mounting for the 7.5-inch 50-calibre B.L. Gun.—The mounting consists of a steel top carriage resting on a horizontal roller bearing on a steel pivot. The cradle in which the gun is free to slide during recoil is cylindrical, and attached to the cradle are three cylinders, one to overcome the recoil, and the other two (one on each side of the recoil cylinder) contain the springs for running the gun up to the firing position after the recoil. The connection between these three cylinders and the gun is made by arms projecting from the breech ring. The whole weight of the moving parts, gun, cradle, and carriage is balanced on the roller bearings above referred to, thus making the training very easy. The elevating and training operations are performed by the rotation of two handwheels conveniently placed with regard to the shoulderpiece against which the gunner leans.

Anti-friction bearings are used where most required, so that these operations are easily performed by one man, notwithstanding the great mass to be moved.

The training gear is so arranged that in case of accident the gear may be easily and quickly disconnected. The recoil cylinder is of the usual construction.

The shield shown on the design is of the usual casemate type.

An electric contact is fixed on the cradle, and is so arranged that unless the gun is in the firing position it cannot be fired.

The special points in connection with this type of mounting are:—

Increased protection from shell fire by the construction of the top carriage, which is of considerable thickness, while the general arrangement of the several parts are well disposed and are under exceptional protection. They are also in few parts, and easily kept in good repair, very little attention being required.

The loading gear consists of a shot tray pivoted on a bar at one side of the cradle so as to move with the gun during elevation or depression, and capable of swinging

on its axis in such a manner that the longitudinal axis of the tray is always parallel to the axis of the gun. The tray is controlled by a worm and worm-wheel gear actuated by a handwheel suitably mounted near the breech; on the left-hand side of the gun a clutch is provided, so that the worm gear may be put out of section and the tray swung by hand only if desired.

A safety arrangement is provided to ensure that the loading gear and the breech mechanism may not collide during the operation of either, and that the gun cannot be fired until the loading gear is out of the line of recoil.

Trials of the new Vickers-Maxim 9.2-inch Gun Mounting.—A trial of the new mounting for the Vickers-Maxim 9.2-inch took place lately at Portsmouth in the presence of Captain A. Barrow, of the "Excellent," and the members of the Ordnance Committee. The trial was of interest as it was the first of a new type which are to be fitted in the "Hogue" and "King Alfred" class of armoured cruiser. In the first part of the trial five rounds were fired in 100 seconds, or three rounds per minute. The mounting worked well, the operations of elevating and training being performed at a specially quick rate. The mounting, of which a description is given above, can be worked by hand as well as hydraulic power, and is very effectively protected by a special steel shield having a weight of 50 tons. The whole revolving weight of the mounting, including the gun, is 120 tons, and by means of balancing it at its centre of gravity, and by the application of anti-frictional devices, the various operations of working the mounting by hand are rendered very easy. Arrangements are made for the gun to be loaded at all the usual firing angles between 4° depression and 6° elevation, the maximum elevation of the mounting being 15° and depression $7\frac{1}{2}^{\circ}$. The full traverse of the mounting through 270° is carried out in 20 seconds, whilst four men can perform the same operation in 70 seconds. Another special feature in connection with this trial was an application of a new mechanism designed by the firm, and described fully above, which can be worked by the single horizontal movement of a hand lever, which renders it possible to open or close the mechanism in about 2 seconds. By the combination of this mechanism with the Q.F. mounting 5 rounds were fired in 1 minute 26 $\frac{1}{2}$ seconds (a rate of 3 $\frac{1}{2}$ rounds per minute). This rate of fire is quite unprecedented and is directly attributable to the special form of mechanism in combination with the mounting.

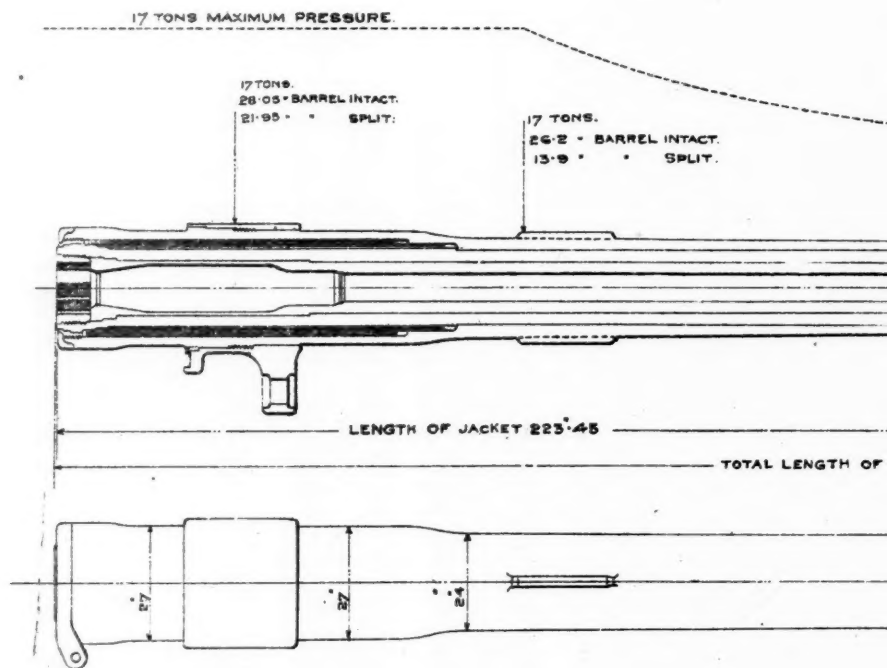
Trial of Armour Plates.—Three 4-inch non-cemented cruiser plates, manufactured by Sir W. G. Armstrong, Whitworth & Co., at their Openshaw Works, were lately tested at Whale Island, these being the first plates of the class submitted by this firm. The trials were conducted by Captain A. Barrow and the staff of the "Excellent." The plates were fixed in the cell in the usual manner without any backing. The gun used was the service 4.7-inch with 45-lb. armour-piercing projectiles, having a striking velocity of about 1,635 foot-seconds. Three shots were fired at each plate, with satisfactory results in each case. The maximum penetration was just over 1 inch, and, when the plates were taken down, there was no appearance of any bulge or cracks on the backs, and, indeed, as far as the appearance of the back of the plates was concerned, it was impossible to tell that they had ever been fired at. All the projectiles were shattered by the impact on the surface of the plates, which fulfilled service requirements. They represent a class of plate of which considerable quantities will be required for the cruisers now under construction and to be built.—*Times, Messrs. Vickers, Maxim & Co., and other sources.*

FRANCE.—The following are the principal promotions and appointments which have been made:—Capitaine de Vaisseau—J. C. L. Gaschard to "Jurien de la Gravière" Capitaines de Frégate—H. A. M. Chevallier to command *Défense-Mobile* at Rochefort; M. P. Hautefeuille to command of *Défense-Mobile* in Algeria; C. T. Ozanne to "Dunois"; L. R. Dartige Du Fournet to Capitaine de Vaisseau.—*Journal Officiel de la République Française.*



— ORDNANCE B.L. 7.5 INC

— Scale $\frac{1}{40}$



CHARGE. (NITRO CELLULOSE)	79 lbs
PROJECTILE.	200
VELOCITY. (FEET PER SECOND).	3000
ENERGY. (FOOT TONS).	12480

PLANS

SUPPLIED BY

— VICKERS SONS AND MAXIM LTD. —

NCH. 50 CALIBRES. ———

$\frac{1}{40}$ ———

— WEIGHT — ^{tons cwt.} 15.15 —

CHARGE 97 lbs NITRO-CELLULOSE.

5.6 TONS

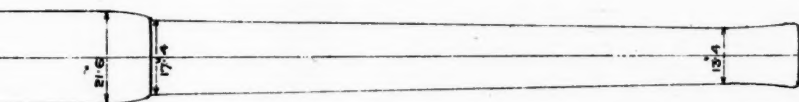
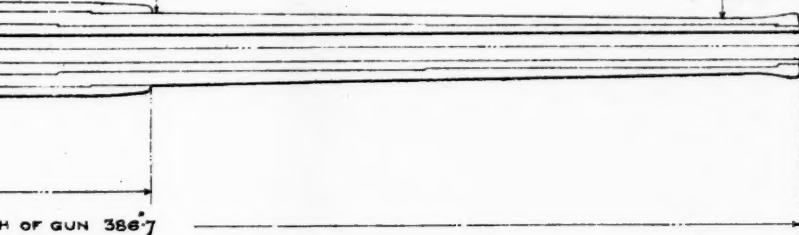
15.75 * BARREL INTACT.

7.7 * * SPLIT.

5.3 TONS

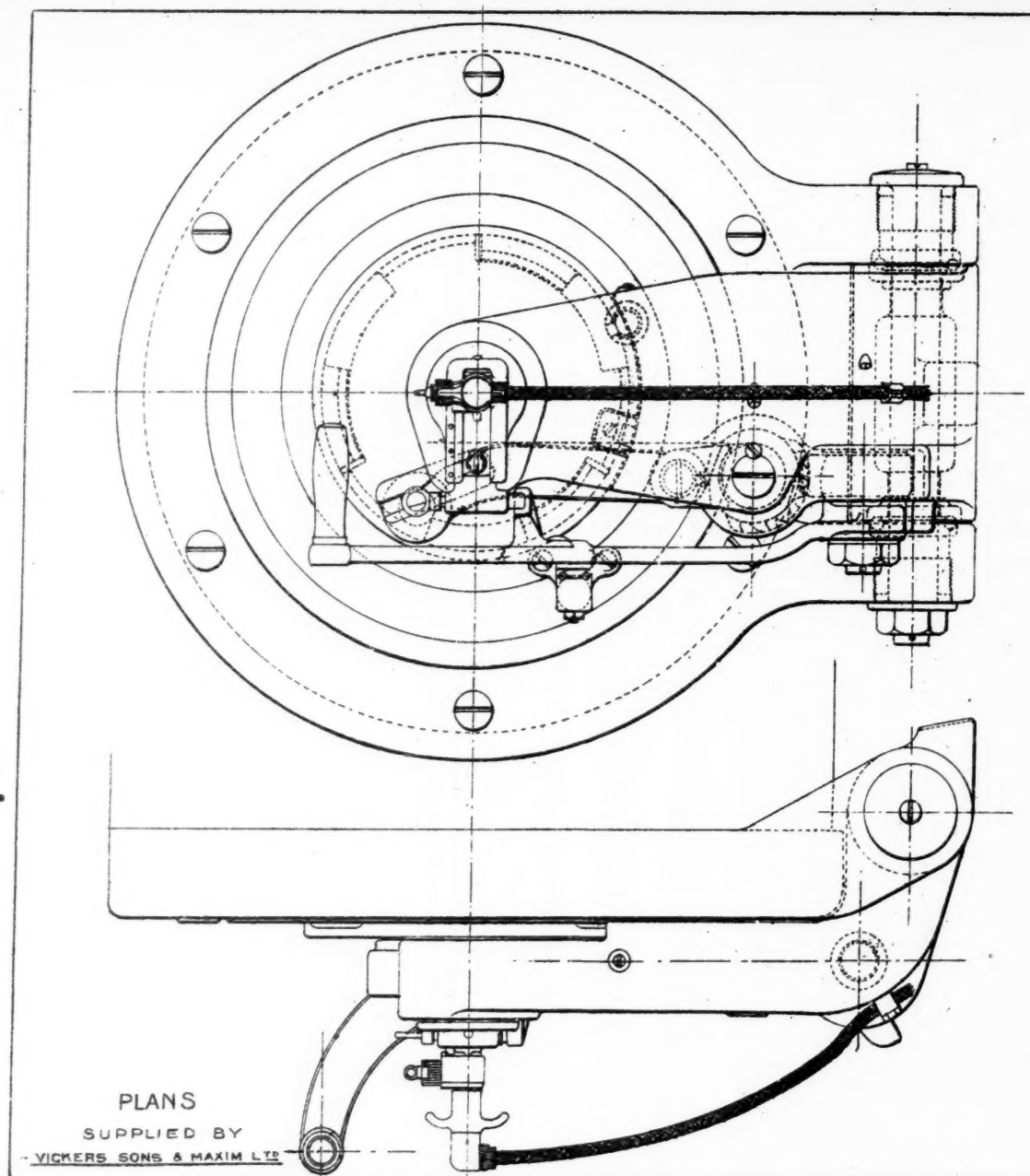
10.5 * BARREL INTACT.

5.05 * * SPLIT.

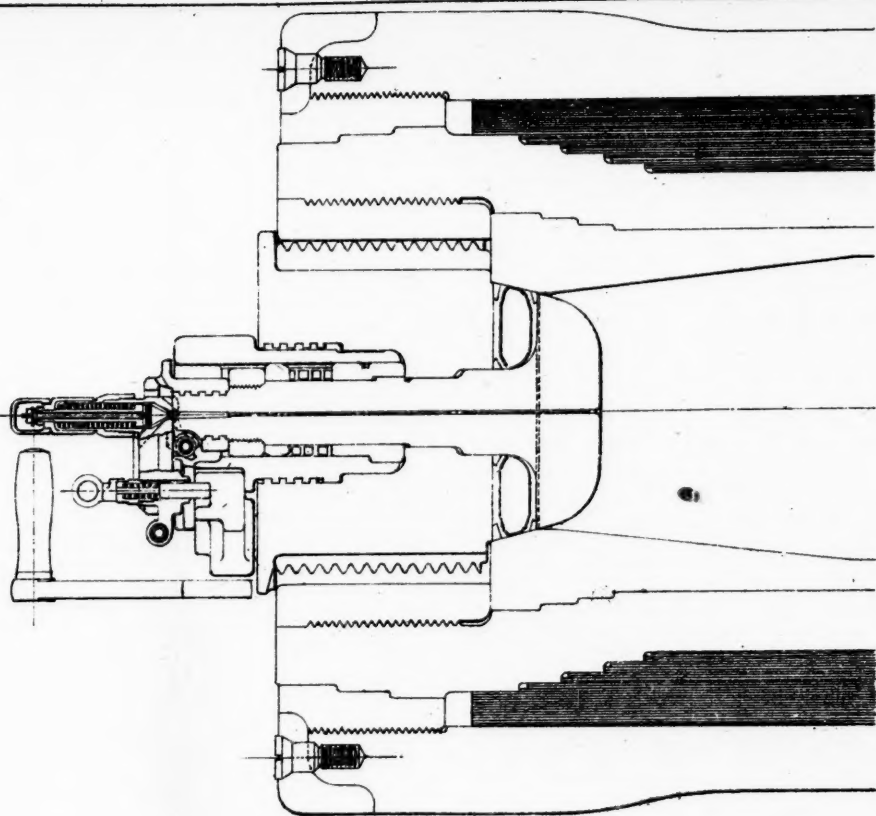


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20.4.1901



W. J. Reinder & Co. Ltd. Lytho. Lough



— BREECH MECHANISM —
— FOR —
— 7.5 INCH B.L. GUN. —
— SCALE $\frac{1}{8}$ th. —

2698 Q.
20.4.1906

— PEDESTAL MOUNTING —

— FOR —

— 7.5 INCH. Q.F. GUN. —

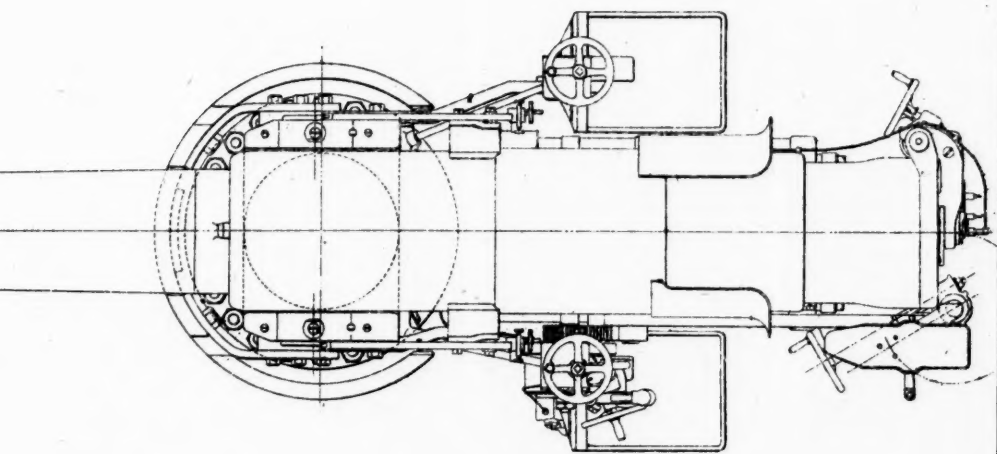
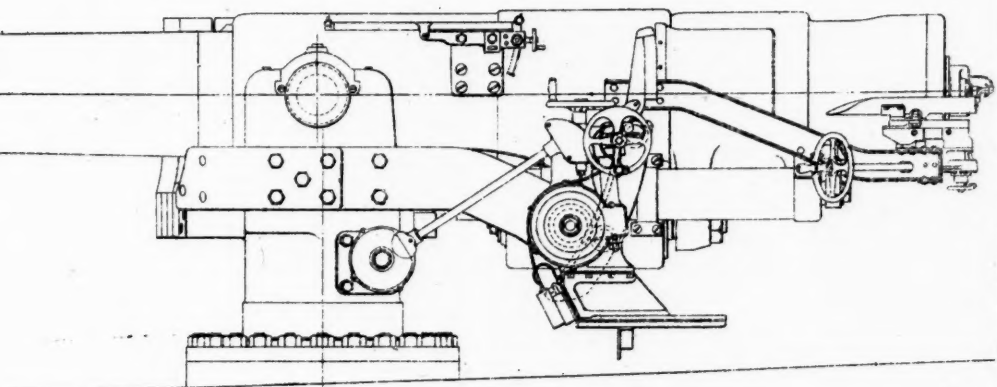
— SCALE 1/32 —

WEIGHT OF GUN TONS. CWT.
= 15 - 15 .
WEIGHT OF MOUNTING WITH SHIELD = 12 - 16 .

PLANS

SUPPLIED BY

— VICKERS SON & MAXIM LTD —



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Movement of Ships.—The Northern Squadron, under the command of Vice-Admiral Ménauld, has been temporarily constituted as follows :—

First Battle-ship Division.

"Masséna" (flag-ship of Commander-in-Chief), "Carnot," "Amiral-Baudin."

Second Battle-ship Division.

"Formidable" (flag-ship of Rear-Admiral De Bausset), "Courbet," "Hoche."

Coast-Defence Battle-ship Division.

"Bouvines" (flag-ship of Rear-Admiral Mallarmé), "Tréhouart," "Jemappes," "Valmy."

Light Division.

First-class armoured cruisers—"Bruix" (flag-ship of Rear-Admiral Gourdon),

"Dupuy-de-Lôme."

Second-class cruiser—"D'Assas."

Third-class cruiser—"Surcouf."

Torpedo-boat destroyers—"Durandal," "Fauconneau," "Yatagan."

During the summer the new first-class cruiser "Chateaurenault," one of the so-called commerce-destroyers, will join the squadron, taking the place of the "Bruix" as flag-ship of the Cruiser Division; while the new first-class battle-ship "Iéna" will, it is hoped, take the place of the "Courbet," although according to the latest reports it is unlikely that she will now be ready before the late autumn. The Northern Squadron was supposed to have completed to their full sea-effective on 1st April, but, as a matter of fact, owing to the paucity of men, all the ships are nearly a third short of their proper complement. The first-class cruiser "Tage" was commissioned at Brest on the 1st inst., and will hoist the flag of Rear-Admiral Servan, in command of the Atlantic Division, replacing the "Cécille," a somewhat smaller ship of the same class; among other improvements which have been made in her during her recent refit has been the removal of much of her woodwork, steel decks covered with linoleum being substituted for the wooden. The first-class armoured cruiser "Latouche-Tréville" commissioned at Toulon on 1st May to replace the third-class cruiser "Lavoisier" in the Mediterranean Squadron; the "Lavoisier" is to be placed in the reserve.

The "Nielly," one of the last of the old wooden cruisers to remain in commission, arrived at Brest from Madagascar, having been relieved as senior officer's ship on that station by the comparatively new second-class cruiser "Catinat"; she will be paid off into the Second Category of the Reserve, but it is unlikely she will be employed again. The new third-class cruiser "Infernet" left Brest on 13th March for the East Indian and Madagascar station.

The second-class cruiser "Isly" and the aviso-transport "Manche" commissioned on the 8th ult. for fishery protection duties off Newfoundland and Iceland; they will be on the fisheries six months, and will then return to France to lay up for the winter; during her stay in the dockyard this last winter the "Isly" has been undergoing modifications in the dockyard hands, the greater part of her wooden decks having been removed and steel covered with linoleum substituted. The second-class cruiser "Jean-Bart" has left Saigon for Lorient, where she will pay off; as no ship has relieved her, this means a reduction of the French fleet in Chinese waters. The repairs to the first-class cruiser "D'Entrecasteaux" are completed; she commissioned on the 6th inst., and she will return to China to hoist the flag of Rear-Admiral Bayle on that station.

The coast-defence division at Cherbourg, under Rear-Admiral Mallarmé, will, it is reported, be shortly dispersed for the purpose of embarking seamen reservists for 28 days' training. On 1st September, when the period of Rear-Admiral Mallarmé's appointment expires, the four coast-defence vessels will be placed in the Second Category of the Reserve. The "Jemappes," of this division, has been taken into the dockyard for repairs to her steam pipes and to be fitted with ten 37-millimetre Q.F. guns. The "Bouvines," of the same division, has also been placed in dockyard hands to have bilge keels fitted and for alterations in the armament.

In the Dockyards.—*Cherbourg.*—The work on the new second-class battle-ship "Henri IV" is being pushed on, and her engines are being rapidly placed in position; her two 10·8-inch guns are mounted in their turrets, one forward and one aft, as well as the after 5·5-inch Q.F. gun, which is mounted in a turret on the superstructure deck, just before the 10·8-inch gun, but firing over it; it is now hoped she will be ready for her trials in the autumn. The work of reconstruction of the coast-defence battle-ship "Requin" is now almost completed; she has received new boilers of the Niclausse type: two 10·8-inch guns in closed turrets have been substituted for the two 13·3-inch guns formerly mounted in *barbettes*, while the upper edge of the water-line armour belt, which was formerly completely submerged, is now 18 inches above the water, the recent modifications having resulted in the general lightening of the ship by some 630 tons; she will now shortly commence her trials.

Brest.—The first-class battle-ship "Hoche," which was only lately commissioned for service with the Northern Squadron after undergoing complete refit and repair, is again in the dockyard hands, and it seems likely that some important modifications will have to be made in her machinery; should the necessary repairs be of an extensive character, she will be paid off into the Second Category of the Reserve while they are being carried out; but it is hoped that this will not be necessary. The first-class battle-ship "Carnot," which has been undergoing repairs, and whose officers and men were temporarily turned over to the second-class battle-ship "Courbet," is now ready for service again, but entirely fresh appointments have been made to her, so it is concluded that the "Courbet" will remain in commission as part of the squadron until after the summer manœuvres, or her place has been taken by the "Iéna."

Satisfactory progress continues to be made with the new first-class battle-ship "Suffren"; her water-line armour belt is in place, and a large consignment of plates for the turrets, conning-tower, and casemates has been received from the contractors; her military masts have also been stepped. Orders have been received that as soon as the new first-class armoured cruiser "Léon Gambetta" has been launched, preparations are to be immediately made for laying down the new first-class battle-ship "République" on the same slip.

Lorient.—The work on the new first-class armoured cruiser "Gloire" is progressing satisfactorily; her rudder, weighing something over 10 tons, has been placed in position, and her armour belt is now being fixed. A sister ship, the "Amiral de Gueydon," will, it is hoped, shortly be ready for her trials; she has been docked to have her screws fixed while the armour, including the armoured turrets, is all in place. The first keel-plates of the "Conté" a third ship of the class, were put in position on 8th January, but work only really commenced on the ship last month; orders have now been received from the Ministry of Marine that she is to be hurried forward for launching as much as possible, and an effort will be made to launch her in six months from the date of her commencement. The new first-class protected cruiser "Juriën de la Gravière" is at last practically completed, and she will be commissioned for her trials on the 15th inst.

It is hoped that the important work for the improvement of the port will shortly be begun; this includes the lengthening of dock No. 2 from 465 feet to 520, at a cost of 200,000 francs (£8,000); and the deepening of the West Channel and roadstead at a cost of 500,000 francs (£20,000). Lorient will then be able to be used as a port of refuge for war-ships in time of war.

Submarine Boats.—The Minister of Marine has issued some important regulations in regard to these vessels. The commandants are to be selected three months in advance of the date on which they are to assume command, in order to familiarise themselves completely with their new duties. A certain number of officers will be authorised, at their own request, while continuing their ordinary duties, to follow all the experiments made with submarines, in order to obtain some experience in their construction and navigation; and the choice of commandants will be made from among those officers who have shown a real aptitude for submarine work. The length of time of command is to be eighteen months, counting from the day of the first plunge, and a list of officers who have served in submarines will be kept at the Ministry of Marine.

The Minister of Marine has issued orders for the commencement of 20 submarine boats: 10 at Toulon, 6 at Rochefort, and 4 at Cherbourg. They will have a displacement of about 70 tons intermediate between the "Gymnote," which displaces 130 tons, and the "Morse," 146 tons. They are to unite all the best points of the existing vessels, but apparently they are for harbour and coast-defence only, and their construction does not preclude the building in the future of submersibles of the "Narval" type for use in the open. The names of the ten new submarines to be laid down at Toulon will be the "Perle," "Esturgeon," "Thon," "Bonite," "Souffleur," "Dorade," "Grondin," "Anguilles," "Aloze," and "Truite."

During the recent visit of the President of the Republic to Toulon, he inspected most carefully the submarine-boat "Gustave Zédé," remaining fully an hour on board and proceeding out into the roads, first watching her manoeuvres on the surface and afterwards experiencing a trip under water. The manoeuvres of the boat were watched with the greatest interest by the foreign officers of the Russian and Italian squadrons in the roads.

Steam Trials.—The new first-class battle-ship "Iéna" has been continuing her trials successfully off Brest. With fourteen boilers alight, the engines developing 5,581-I.H.P., a mean speed of 13·8 knots was obtained, the coal consumption per I.H.P. per hour being 625 grammes; the contract permitted a consumption of from 650 to 700 grammes, so the manufacturers will gain a premium of 200 francs (£8) for each gramme saved, amounting to some 5,000 francs (£200); on the next trial, with the engines developing 9,830-I.H.P., a mean speed of 16·3 knots was maintained, with a coal consumption of 765 grammes per I.H.P. per hour; the trial was for twenty-four hours.

The new torpedo-boat destroyers "Pique" and "Épée" have been continuing their trials. With the engines making 247 revolutions, the first-named made 20·7 knots, increased to 25·5 knots with 297 revolutions; while the latter, using only one group of boilers, maintained a mean speed of 19·5 knots, while with the engines making 301 revolutions a speed of 25·6 knots was attained on the measured mile.

The Défenses-Mobiles.—The new torpilleurs-de-haute-mer "Borée," "Tramontane," "Bourrasque," and "Rafale," with the new first-class torpedo-boats Nos. 245, 246, 247, 225, and 226, are to be attached to the *Défense-Mobile* at Toulon. Nos. 248, 249, and 250 are detailed for similar duties at Corsica, and Nos. 261, 262, and 263 at Bizerta. The new torpilleurs-de-haute-mer "Sirocco," "Mistral," "Typhon," "Trombe," and "Audacieux," with the new first-class torpedo-boats Nos. 258, 259, 260, and 223, go to strengthen the *Défense-Mobile* at Brest, while Nos. 243, 253, 254, and 255 are detailed for Cherbourg; Nos. 256 and 257 for Dunkirk; Nos. 264 and 265 for Rochefort, and Nos. 242 and 244 for Saigon. There is thus being made a general and substantial increase to all the *Défenses-Mobiles*, all these latest additions being vessels of the newest type. During peace-time it is intended to attach the new destroyers of the "Hallebarde" type only to the sea-going squadrons although it is probable that in time of war the new torpilleurs-de-haute-mer maintained in groups in the Reserve will also be attached to the squadrons.

The French Mediterranean and Italian Squadrons at Toulon.—Toulon was *en fête* from 8th to 13th April over the visit of the Italian fleet, under H.R.H. the Duke of Genoa, and of the President of the French Republic, who arrived on the 12th from Villefranche on board the "St. Louis," the flag-ship of Vice-Admiral de Maigret, escorted by the Mediterranean Squadron, in order to greet the Duke and the King and Italian nation in his person. The Mediterranean Squadron, which was present at Toulon in its full strength, was composed of the following ships:—

First Division.

First-class battle-ships—"Saint Louis" (flag-ship of Commander-in-Chief)
"Charlemagne," "Gaulois."

Second Division.

First-class battle-ships—"Charles-Martel" (flag-ship of Rear-Admiral Aubry de la Noë), "Bouvet," "Jauréguiberry."

Light Division.

First-class armoured cruisers—"Pothuau" (flag-ship of Rear-Admiral Caillaud),
"Chanzy."

Second-class armoured cruisers—"Du Chayla," "Cassard."

Third-class cruisers—"Linois," "Lavoisier," "Galilée."

Torpedo-boat destroyers and torpilleurs-de-haute-mer—"Dunois," "Hallebarde,"
"Espingole," "Forban," "Flibustier," "Cyclone."

The Italian Squadron was composed as follows :—

First Division.

First-class battle-ships—"Lepanto" (flag-ship of H.R.H. the Duke of Genoa),
"Sicilia," "Sardegna."

First-class armoured cruisers—"Giuseppe Garibaldi," "Varese."

Torpedo-aviso—"Urania," "Agordat."

Torpedo-boat destroyer—"Lampo."

Second Division.

First-class battle-ships—"Dandolo" (flag-ship of Rear-Admiral Colleletti),
"Morosini," "Andrea Doria."

First-class armoured cruiser—"Carlo Alberto."

Torpedo-aviso—"Partenope."

Torpedo-boat destroyers—"Dardo," "Strale," "Fulmine."

Of the two fleets, the French was undoubtedly the more powerful, the battle-ships of which it was composed being all modern ships, better armed and far better protected than the Italian vessels, which are all of an older type, with long unarmoured ends and very insufficient armour protection. On the other hand, the three Italian armoured cruisers are better and more powerful vessels than the corresponding types attached to the French squadron.—*Le Temps* and *Le Yacht*.

GERMANY.—*Mishap to the "Kaiser Friedrich III."*—As the first-class battle-ship "Kaiser Friedrich III.," the flag-ship of Vice-Admiral H.R.H. Prince Henry of Prussia, Commander-in-Chief of the First Squadron, was on her way from Danzig to Kiel, she touched, when steaming at full speed, on the Adlergrund to the south of the Island of Bornholm, about 1.30 on the morning of the 2nd ult. The ship passed over the obstacle which it had encountered, but it was discovered that four of the water-tight compartments were leaking, and the bulkheads were at once closed. Meanwhile it was reported from the stoke-holds that fire had broken out in the bunkers. Orders were at once given to clear away all the boats on board the "Kaiser Friedrich III." and on board the next vessel, the battle-ship "Kaiser Wilhelm II." After many hours of strenuous exertion it was found possible to subdue the fire. The engines had ceased to work in consequence of the shock, and the ship had been taken in tow by the "Kaiser Wilhelm II." Ultimately the cable parted, but in the meantime the engines had been restored to working order. It is evident that for a time the vessel was in serious danger. The tanks of "mazut" (a preparation of waste petroleum used for fuel) had been broken open by the shock when the battle-ship touched ground, and their contents flooded the stoke-holds, where there was soon a sea of flame. The stokers behaved with great gallantry and presence of mind, and managed at the risk of their lives to put out the fire, to shut off the steam, and to close the ventilators before leaving the stoke-holds. Two of the staff were seriously injured. The stoke-holds, store-rooms, and magazines had to be flooded, and much damage was done. Eight of the boilers were also found to be badly damaged. The bulkheads of some of the compartments began to bulge in consequence of the pressure of the water pumped into them, and had to be propped—an operation attended by considerable danger. Prince Henry remained the whole time with the officers and men who were at work in these dangerous circumstances, and in reply to the remonstrances of his staff declared, "I shall be the last to leave the ship."

When all danger was over, it was found possible to raise sufficient steam in the undamaged boilers to enable the ship to proceed to Kiel, where she was immediately docked. An examination showed that the whole of the ship's bottom had been more or less damaged, and in parts torn open; all three propellers were injured, and eight of her boilers. Some temporary repairs were effected at Kiel, and the ship has since proceeded to Wilhelmshaven, where the work of repairing her completely will be taken in hand, and will probably take three or four months, or even longer, and it is estimated that the cost will be quite £150,000. Lieutenant Deimling, of the Nautical Section of the German Admiralty, has been despatched with a surveying-ship, a mining-ship, and a torpedo-boat to examine the waters to the north of the Adlergrund. This dangerous chain of submarine reefs and shallows was first surveyed in 1878. It was found to extend at a depth of less than 10 metres below the surface for a distance of about 4 nautical miles to the north-west and south-east, and to be about 2 nautical miles in breadth. In 1879 the shallowest parts were dredged to a depth of 6 metres below the surface. The Adlergrund is situated midway between the Islands of Bornholm and Rügen, being about 27 nautical miles distant from the highest points of each of these islands. The passage between Bornholm and the Adlergrund has always been regarded as exceedingly dangerous, and even ships proceeding from the west of the Baltic to Danzig and Pillau generally prefer the longer route to the north of the island. The sailing instructions for the German Navy contain special directions for ships passing the Adlergrund.

The Berlin correspondent of the *Times* sent to that paper the following semi-official statement, which was published in the *North German Gazette*, with the view of correcting several misapprehensions appearing in the German Press with regard to the grounding of the battle-ship. Exception is especially taken to the statement that the passage between the Adlergrund and the Island of Bornholm is dangerous, and that large vessels used to be directed by the Baltic Navigation Directions to keep to the north of Bornholm. The semi-official journal continues:—"As a matter of fact, there is not the slightest reason why any vessel, however large, should not, when proceeding from Danzig to Rügen, pass south of Bornholm between Bornholm and the Adlergrund. The passage to the north of Bornholm is a roundabout way, and a trading vessel would never take it, simply because it would lose time. All naval officers are perfectly familiar with the character of the passage by these routes. The open water between the shallows at Bornholm and Adlergrund is 8 nautical miles broad, and is well provided with light-ships. His Majesty's ship "Kaiser Friedrich" passed Bornholm on the usual course, and was at this point steaming in about 50 metres (21·840 fathoms) of water. With reference to the precautions adopted in navigating the passage, the following may be stated as absolutely certain:—It was clear weather, the lights were quite visible, and the moon was shining. The commander was on deck during the whole time with the navigating officer. The position of the ship was constantly verified by soundings, taken in accordance with the guidance of the numerous lights that were available for determining where the vessel was. The ship was steaming at the highest speed, according to instructions—that is to say, it was a kind of trial trip to test the capabilities of the ship and its speed. Only well-trained helmsmen were, therefore, selected for the steering. The position of the ship on its course could be verified by soundings taken on the Stolper Bank, as well as by the sea lights. The course which was taken was well clear of the light-ship, and was shaped during the trip in order to allow for the difference between the true and the magnetic north, which varies with the longitude. The amount of deviation was ascertained by means of astronomical observations, which were taken four times during the night. Every time the position of the vessel was ascertained the result was found to be in agreement with the course pursued and the distance covered by the ship. The Adlergrund light-ship came into sight in the direction and at the time expected. It is the general custom, and is correct according to the principles of navigation, that a light-ship which is supposed to be placed in a position enabling seafaring vessels to recognise and avoid shallows should be passed on the open side at a distance of about 100 yards. The cause

to which the accident is to be ascribed will appear from the investigations into the position of the light-ship and any changes that may have taken place in the position of the light-ship. These investigations have already been begun, but have not yet been finished. It would probably be advisable for the newspapers to refrain from criticisms, and especially from criticisms which are the work of people without any great knowledge of navigation, until the result of these investigations is known."

RUSSIA.—The following appointments have been made:—Vice-Admiral Hildebrandt to be Commander-in-Chief of the Black Sea Fleet; Andreev, from the same, to be Commander-in-Chief of the 1st Fleet Division; Dubasov, from the latter, to be President of the Naval Technical Committee. Rear-Admirals Veseli and Kasherinov to be Junior Flag Officers of the Black Sea Fleet. Captains—Silman, to the coast-defence ironclad "Pervenets"; Zagorianski-Kisel, to command 2nd Seamen's Division; Nevinski, of the 1st Seamen's Division, to the 3rd Seamen's Division and the battle-ship "Piotr Veliki"; Molos, senior, to command 14th Seamen's Division and battle-ship "Oriol"; Miklukh, to the "Nie Tron Menia"; Kupceanov, of the "Imperator Nikolai I." to 17th Seamen's Division; Dobrovolski, to command 1st Seamen's Division; Sukhotin, to first-class cruiser "Aurora."

Latest stations of ships as officially reported on 1st April:—

IN THE PACIFIC.

Port Arthur.

Battle-ship—"Navarin."

First-class cruisers—"Admiral Kornilov," "Vladimir Monomakh."

Gun-vessels—"Gremiashchi," "Sivuch."

Torpedo-cruisers—"Vsadnik," "Haidamak."

Mazampo.

Battle-ships—"Sissoi Veliki," "Petropavlovsk."

First-class cruisers—"Rossia," "Admiral Nakhimov."

Shan-hai-Kwan.

First-class cruiser—"Dmitri Donskoi."

Nagasaki.

Second-class cruiser—"Zabiaka."

Taku.

Gun-vessel—"Bohr."

Foochau.

Gun-vessel—"Mandchur."

Shanghai.

Gun-vessel—"Otvajni."

Chemulpo.

Gun-vessel—"Giliak."

Manilla.

Second-class cruiser—"Razboinik."

En route to Pacific—Sabang.

Battle-ship—"Poltava."

Hong-Kong.

Battle-ship—"Sevastopol."

Colombo.

Torpedo-vessels—"Kit," "Skat," "Kosatka," "Delphin."

MEDITERRANEAN.

Genoa.

Battle-ship—"Imperator Alexander II."

Gun-vessel—"Khrabry."

Torpedo-cruiser—"Abrek."

Torpedo-boats—Nos. 119, 120.

Suda.

Gun-vessel—"Kubanets."

ATLANTIC.

At Fayal.

First-class cruiser—"Hertsog Edinburgski."

Punto Delgada.

Second-class cruiser—"Djigit."

Philadelphia.

First-class cruiser—"Variag."

Cadiz.

Imperial yacht—"Standart."

New Ships.—The first-class protected cruiser "Bogatyr," launched not long ago at the Vulcan Works, was ordered as the result of a competition in April, 1898, and three of the same model were laid down in Russian yards. She is of the best German steel, her dimensions being:—Length, 440 feet 2 inches; beam, 54 feet 5½ inches; draught, 34 feet 1½ inches amidships. With her complete equipment and 720 tons of coal on board, her displacement will be 6,750 tons. She has two screws, and triple-expansion engines with four cylinders, which together are to give 20,000-I.H.P., and a speed of 23 knots. There is an armoured deck extending the whole length of the ship; the thickness of the middle horizontal portion of this armour is 33 millimetres, while the sloping part of the same is 69 millimetres, and at the extremities 54 millimetres. The upper of the two layers is composed of nickel steel. Her armament of Q.F. guns comprises twelve of 15-centimetre (5·9-inch), twelve of 7·5-centimetre (14-pounders), and six 4·7-centimetre (3-pounders) Hotchkiss guns, also one 65-millimetre Baronovski gun, and two 3·7-centimetre Hotchkiss guns for the boats. Of the larger guns eight are protected by armour, being in pairs in revolving turrets on the poop and forecastle; the remaining four are on the upper deck in casemates, one a bow and one a stern chaser. The turrets have armour of 125 millimetres in front and 90 millimetres behind, the former of toughened nickel steel, and their ammunition-hoists have soft nickel steel protection of 75 millimetres thickness. The casemates have nickel steel armour of 80 millimetres in front and 35 millimetres behind, and their ammunition-hoists 60 millimetres thickness of the same. There are six torpedo-tubes: one submerged at the bow, one submerged at the stern, and two submerged and two above water on the broadside. The conning-tower has armour of toughened nickel steel of 140 millimetres and shields of 90 millimetres. She has two pole masts, and her coal bunkers, partly above and partly below the armour protection, have space for 1,000 tons of coal.

At the proof-ground of the Bethlehem armour plate works at Indian Head, in America, the 6-inch plates for the battle-ship "Imperator Alexander III.," now building at the Baltic yard, were lately tried. Armour-piercing projectiles were used, having a velocity of from 1,910 to 1,930 feet per second, but they did not penetrate more than 2 inches into the plate, which had no cracks. The plates are made of nickel steel and are for broadside protection.

The destroyer "Osioir," launched at the Gravelle Wharf at Havre, has been detained there some time to await the launch of her sister boat, the "Forel," from the Forges et Chantiers de la Méditerranée. Their trials will take place at Cherbourg, the highest speed they are estimated to attain being 26 knots, which is supposed to be compensated by the solidity of their construction both as regards engines and hulls.

Cellulose has fallen into great disfavour among Russian naval architects for employment in the cofferdams of protected cruisers. A sort of maize briquettes are to be employed in their stead, and the first-class cruisers "Aurora," "Diana," and "Pallada," the "Novik," "Boyarin," and other fast cruisers under construction at French, American, and German yards, notably the last but one at the Schichau Works at Elbing, are to be constructed on this principle. Experiment has shown that cellulose spreads a most stifling smoke; corn-pith has also been tried, but without success. The naval authorities now consider that they have satisfactorily solved the question by the employment of maize.

The Baltic Building Works are busy working plans for an improved cruiser of the "Novik" type, now under construction at the Schichau Works at Elbing. She is estimated to make 25 knots.

In consequence of the rapid disappearance of rigging, the Naval Technical Committee has decided that battle-ships and first-class cruisers are to have two masts each of uniform height and rigging, one being only allowed in cases where there is absolutely no possibility of setting up a second. They are to have two light yards, the upper being not less than 12 feet above the funnels. They are to be of wood, as also the topmast, or, at any rate, wood above and hollow iron below. The topmasts are to be like those of the English cruiser "Eclipse," at least 160 feet above the water-line at the truck. The rigging is to be of steel wire.

Dockyard Notes.—With regard to the construction of the new basin at the Port of Revel, in spite of the winter, the work has been carried on incessantly, and is much further advanced than was expected. It is hoped that by next autumn it will be ready for the water to be let in. The depth is to be 21 feet, which will admit of small men-of-war entering. It is chiefly intended to afford harbourage during the winter for Government vessels. The earth dug out for the purpose is being used to fill up part of the Bay, so as to keep the Fellin terminus from being inundated. In the course of the work the remains of ships that have been wrecked at various times and are now at a depth of from 3 to 10 feet under the surface have been discovered.

A new armour plate factory is in course of erection at the Ijora Government yard, in pursuance of the plan of obviating as far as possible the costly purchases in other countries. Private firms have been found to be unable to set up such works owing to the expense. Armour has been for some considerable time turned out by these works, but not in sufficient quantities to meet the demand. The furnaces will be fed with naphtha from the already existing duct, which even now extends some $5\frac{1}{2}$ miles. At the same works important additions in the shape of a factory for the production of funnels without joins and another for fuses are in process of erection.

An increase is in contemplation of the staff of naval engineers at Port Arthur, which so far has been very inadequate, so much so that Chinese or engineers from other ports have had to be employed to bring ships into the dry-dock there. As a considerable part of the shipbuilding work will shortly be transferred from Vladivostok to Port Arthur, the increase is still more urgent. The number of engine-room ratings entered this year is 1,100, distributed as follows:—

Engineers, second-class	...	...	...	...	...	178
Engineer apprentices	...	...	...	...	...	339
Stokers, second-class	...	...	...	...	...	58
Stoker apprentices	...	...	...	...	...	483

For various reasons 52 were rejected.

Great complaints are made of the insufficiency of the docks at Kronstadt. Some slight repairs to the "Kniaz Pojarski" recently were only carried out with the greatest difficulty. All that was wanted was to clean her screw, but the "Admiral-General Apraxin" and "Poltava" being already in dock, she had to wait two weeks while the work was done by divers. There being no room for the construction of a new dock, the only chance would be to extend the two existing ones so as to contain two modern vessels, the northern portions being

reserved for those requiring serious and lengthy repairs. There was a proposal to adapt the Petrovski Canal near to the dock, but the project was not favourably received, owing to the walls letting in water. It is now proposed to deepen the canal, so that an opportunity would arise of testing how far the walls were defective, and if found in good order this plan will very probably be carried into execution.

Kronstadt, as at present constituted, is solely a place for docking and repairing ships. It is proposed to agitate for the revival of the project to turn it into a real building yard, which it was at one time, for large ships were laid down there previous to 1867, and various smaller vessels between 1874 and 1894, a harbour vessel of considerable size having been launched in 1892, and at the Petrovski Dock the "Vodolei" was built. For one thing, constructors are kept there so long that they would lose their originality and power of invention if not allowed to exercise it on new vessels, and also there would be no chance of qualifying for promotion. So many of the major operations of shipbuilding are already carried out there, that there can be no sufficient reason for not building ships as well. As many as twenty-five ships often come into the hands of one constructor, so that his opportunities for learning this work must be considered ample. There is also ample practice for smiths and forge work. Probably the near neighbourhood of St. Petersburg is a considerable factor in the unwillingness of the Government to further the proposal.

The Naval Cadet School.—The Naval Cadet School is about to celebrate what is now recognised as the 200th year of its existence. A decree to this effect has been issued, setting forth the identity of the school with the School of Navigation originally founded by Peter: "To the glory of the most glorious name of the all-wise God and my own reign, and to the profit and advancement of Orthodox Christianity, to which end it is needful to be a mathematician and a navigator, cunningly learned in the arts of seafaring." There were 300 pupils originally in this school, which continued to exist, side by side, with the later "Naval Gentlemen's Corps of the Academy of the Naval Guard" until 1753, when the institution took its present form. A statue of the illustrious founder has been ordered in Paris of the sculptor Autokolski, which will be set up in the dining-hall, and a new flag is to be presented also, with the figures 1701-1901, underneath a huge St. Andrew's cross in blue on a white ground. The two-headed eagle of the Imperial crest, in the centre, holds in its claws maps of the four seas—the White, Baltic, Black, and Caspian. Souvenirs are to be issued to, and badges to be worn on the breast of the staff and pupils, while the attendants are to have a silver rouble of the year 1901.

Additional Courses for Officers.—It is now proposed to give extended instruction in navigation to certain chosen combatant officers to enable them to take the place of the navigators when required. It is complained that the instruction is not now of a sufficiently practical kind, so that even the regular navigators are insufficiently qualified. There is also a very defective knowledge in all branches of surveying. It is proposed to set apart a torpedo-vessel for training officers in this direction. The spring is to be utilised for the purpose, so that the summer months may not be lost. These officers will mostly be appointed to smaller vessels where there is not thought to be need for a navigator.

The constantly increasing application of electricity to so many naval purposes, more especially the complicated machinery of turrets, has led to the suggestion that it might be advisable to supplement the instruction given in the gunnery classes. This is, no doubt, sufficient for the management of the guns themselves, but where the repair of accidents to the more difficult apparatus is in question the gunnery officer is often quite at fault. It is not proposed to give this to all gunnery officers, but a few selected for the purpose, as that would entail the lengthening of the course, the programme being already more than sufficiently crowded. But those who specialised in the subject would stay another year for

the purpose at their option. Only one such officer would be appointed, and that only to large ships, where electricity is extensively applied.

Coal and Naphtha Fuel.—It appears that the Russians have been trying some American coal, which was in the first instance taken over to the extent of 3,074 tons in the English steamer "Acconne" (*sic*) from Newport News, at 17s. a ton freight, ordered by the bone-consuming works at St. Petersburg. It has been pronounced on very favourably, as not inferior in quality to Cardiff. As the coal costs 10s. a ton on the spot, this is decidedly below the average. It appears that the total production in Russia is some 10,000,000 tons a year, while the import was in 1897. 92,000,000 in round numbers, St. Petersburg taking 1,280,000. It has been proved that 10 tons of English coal are equal in warmth-producing capacity to 12 of the Russian. As both naphtha and wood are dear, the supply of the cheap imported coal is very essential. The freight of English coal has grown from 4s. 6d. earlier in the year to 8s., which also happened last year or near abouts. It would seem to be largely a question of ordering early.

There is now considerable doubt whether naphtha is really cheaper than coal. The present price in St. Petersburg is 12 roubles, or, say, 38s., and the American coal with freight is only 27s. per ton. It takes about 7.143 tons of it to make 10 tons of English or 12 tons of Russian. So that really the naphtha comes out at 22 per cent. dearer than even English coal. Then there is the cost of installation and of up-keep and repair, which is more than equal to the cost of the staff required for coal. The Baltic Railway, after spending 500,000 roubles on the necessary apparatus for the patent fuel, has begun seriously to think of returning to the old material, and one branch has already done so. It must be said, however, that no general rule can be laid down, as there is great variation according to place. In coast towns there can be no doubt as to the greater cheapness of the foreign coal, owing to the cost of carriage of the home fuel. Moreover, the supply of naphtha in districts where nothing else can be procured is far from sufficient for the needs. In these parts "mazut" will remain in favour.

In connection with the order placed by the Russian Government at Newcastle for 113,000 tons of coal for the Baltic Fleet, the conditions are that the firm shall in the course of the current cruising season deliver at Kronstadt 90,000 and at Libau 23,000 tons of best Northumberland coal and small quantities of other kinds and of coke. The price agreed on for the former, including carriage, is 15s. 11d. in the first case and 15s. 10d. per ton in the second, or somewhat lower than the prices now quoted at the Newcastle Exchange. A committee, presided over by Vice-Admiral Dubasov, having considered the question of preparing for sea the torpedo-vessels of the "Pernov" type built at the Neva Works, the question whether coal should be substituted for naphtha had to be postponed owing to insufficient information as to the supply.—*Kronstädtski Viēstnik*.

SWEDEN AND NORWAY.—*The Swedish Naval Estimates for 1901.*—The Ordinary Estimates amount to 8,652,016 crowns (£480,667 11s. 1d.), and the Extraordinary to 13,422,105 crowns (£745,672 10s.). The principal items of the Ordinary Budget are as follows :—

	Crowns.	£	s.	d.
Ministry of Marine	85,900	4,772	4	5
Personnel of the Fleet	3,711,987	206,221	10	0
Repairs and maintenance of the Fleet ...	1,725,000	95,833	6	8
Armaments, etc.	1,231,900	68,438	17	9
Schools	51,520	2,862	4	5
Hydrographical Department	65,000	3,611	2	3
Divers' expenses	158,000	8,777	15	7
Pilotage, lighthouses, etc.	1,500,409	83,356	1	1
School ships	100,300	5,572	4	5
Meteorological Department	9,000	500	0	0
Supplementary	13,000	722	4	5

The principal items of the Extraordinary Budget are as under :—

	Crowns.	£	s.	d.
Naval Construction	7,823,500	==	434,638	17 9
Reconstruction of armour-clads "Svea," "Göta," and "Thule"	2,420,000		134,444	8 11
Reconstruction of the monitors "Thördon" and "Tirfing"	100,000		5,555	10 11
Ammunition for the Fleet	315,000		17,500	0 0
Automobile torpedoedoes	96,900		5,383	6 8
Firing trials	15,000		833	6 8
Armament of the fortification of Carls- crona and the Faro Sound	852,500		47,361	2 3
Fixed defences	150,000		8,333	6 8
Pumping engines for new basin at Carls- crona	85,000		4,722	4 5
Reserve coal for mobilisation	628,145		34,896	18 11
Fixed defences at the entrances to Göte- borg	628,145		34,896	18 11

Under the building vote provision is made for progress with two small battle-ships, which are to have a displacement of 3,650 tons and engines developing 5,500-I.H.P., to give a speed of 17·5 knots; a torpedo-cruiser of the "Psilander" type of 800 tons displacement, with engines developing 1,500-I.H.P., to give a speed of 20·5 knots; a 30-knot torpedo-boat destroyer and four torpedo-boats, the reconstruction of the monitors "Thördon" and "Tirfing," which are intended to form part of the defence of Carlscrona; their new armament of two 24-centimetre (9·4-inch), two 4-inch Q.F., and eight 6-pounder Q.F. guns.

The Norwegian Naval Estimates for 1901.—The Estimates amount to 4,485,000 crowns (£249,166 13s. 4d.); being an increase of 120,000 crowns (£6,666 13s. 4d.) over the preceding year. The principal items are as follows :—

	1900-01.			1899-1900.		
Vote 1.	Crowns	£	s. d.	Crowns	£	s. d.
Ministry of Marine	54,000	(3,000 0 0)	...	35,000	(1,944 8 11)	
Officers' Corps... ..	274,000	(15,222 4 5)	...	256,000	(14,222 4 5)	
Medical "	37,000	(2,055 11 1)	...	36,000	(2,000 0 0)	
Warrant and Petty Officers and Men... ..	335,000	(18,611 2 3)	...	333,000	(18,500 0 0)	
Torpedo <i>Personnel</i> , fixed and Automomobile	65,000	(3,611 2 3)	...	107,000	(5,944 8 11)	
Workmen in Dockyards	334,000	(18,555 11 1)	...	285,000	(15,833 6 8)	
Administration of the Dockyards	159,000	(8,833 6 8)	...	164,000	(9,111 2 3)	
Organisation Changes	80,000	(4,444 8 8)	...	—	(— —)	
Vote 2.						
Naval Schools... ..	361,000	(20,055 11 1)	...	351,000	(19,500 0 0)	
Vote 3.						
Drills and Training Cruises, including 30,000 crowns (£1,666 13s. 4d.) for Mobilisation	1,045,000	(58,055 11 1)	...	553,000	(30,722 4 5)	
Vote 4.						
New Construction	800,000	(44,444 8 10)	...	827,000	(45,944 8 11)	
Repairs and Maintenance of the Fleet	138,000	(7,666 13 4)	...	352,000	(19,555 11 1)	
Submarine Mines	34,000	(1,888 17 9)	...	149,000	(8,277 15 7)	
Guns	197,000	(10,944 8 11)	...	133,000	(7,388 17 9)	
Medical Service	17,000	(944 8 11)	...	16,000	(888 17 9)	
Maintenance of the Dockyards, etc.	423,000	(23,500 0 0)	...	451,000	(25,055 11 1)	

The new constructions for the year include the completion of two large torpedo-boats, Nos. 9 and 10, and of the cistern-ship "Farm"; the construction of four other torpedo-boats and the repairs of the first-class gun boat "Sleipner."

The new Swedish torpedo-cruiser "Psilander" has lately completed her steam trials successfully. She was built at Bergsund, near Stockholm, and is a vessel of 800 tons displacement, 232 feet long, with a beam of 27 feet 3 inches and a draught of 8 feet 10 inches. Her armament consists of two 4.7-inch Q.F. and four 6-pounder Q.F. guns with one submerged torpedo-tube. The ship is fitted with eight Yarrow water-tube boilers and the engines are to develop 4,500-I.H.P., giving a speed of 20.5 knots. At the trial trip under natural draught the engines developed 2,946-I.H.P., the mean speed being 19.3 knots; at the forced-draught trial the engines developed 4,775-I.H.P., the mean speed being 20.7 knots.—*Mittheilungen aus dem Gebiete des Seewesens.*

UNITED STATES.—Résumé of Naval Appropriation Bill.—The Naval Committee of the House on Saturday, 19th January, presented to the House the Bill "Making Appropriation for the Naval Service for the fiscal year ending 30th June, 1902, and for other purposes."

The amount carried by this Bill is \$77,016,635.60 (£16,015,132 5s. 10d.), the largest ever reported to the House from the Committee on Naval Affairs.

Total estimates of the Department amounted to \$87,172,430.76 (£18,166,923 6s. 8d.). The deductions amounted to \$1,155,795.16 (£236,623 19s. 2d.). The Bill, therefore, carries a total of \$77,016,635.60 (£16,015,132 5s. 10d.), a proposed increase of appropriations over the Naval Appropriation Act of last year of \$11,865,718.93 (£2,472,024 11s. 6d.). More than \$9,000,000 (£1,875,000 0s. 0d.) of this is to carry on the work of constructing battle-ships and cruisers authorised by previous Acts, and \$3,000,000 (£625,000 0s. 0d.) to carry on the work of reconstructing the Naval Academy.

Nearly all of the bureaus submitted increased estimates, which are explained as a necessary result of naval development. The programme for public works at the various navy yards has been reduced from last year's appropriation, for the reason that the committee believes that the large number of new buildings authorised by the law of last year should be practically completed before authorising additional ones.

The Pay of the Navy in this Bill is \$15,200,284 (£3,166,725 16s. 8d.). The force provided for is 1,898, on the Active List, 566 retired, 371 naval cadets, 150 clerks, 22,500 enlisted men, 50 warrant machinists, 2,500 apprentices, and 20 mates; a total of 28,055. An increase of \$2,489,387 (£518,622 5s. 10d.) is accounted for by the authority granted to the Department to enlist 5,000 additional seamen and 50 warrant machinists.

Comparative Statement.	Estimates, 1902.			Carried by Bill.			Appropriated, 1901.		
	\$	£	s. d.	\$	£	s. d.	\$	£	s. d.
Pay of Navy	15,125,684.00	3,511,425 16 8		15,200,284.00	3,196,796 13 4		12,810,897.00	2,988,396 17 9	
Pay, miscellaneous	600,000.00	125,000 0 0		600,000.00	125,000 0 0		500,000.00	10,116 13 4	
Contingent, Navy	10,000.00	2,063 6 8		10,000.00	2,063 6 8		20,000.00	4,166 13 4	
Emergency	500,000.00	10,416 13 4		500,000.00	10,416 13 4		300,000.00	6,250 0 0	
Bureau of Navigation	701,725.00	146,192 14 2		610,125.00	127,109 7 6		571,225.00	119,095 4 2	
Bureau of Ordnance	2,601,455.75	541,969 15 10		2,575,255.75	578,178 2 6		2,388,124.00	109,559 6 8	
Bureau of Equipment	4,464,802.52	990,167 1 8		4,064,802.52	846,833 15 0		3,464,652.52	721,677 10 0	
Bureau Yards and Docks	661,817.24	137,878 10 10		624,679.98	130,141 9 2		608,439.93	126,758 2 10	
Bureau Public Works	12,302,540.00	2,563,029 3 4		6,514,010.00	1,367,085 8 4		8,105,867.32	1,688,472 5 10	
Public Works, Naval Observatory	28,000.00	5,816 13 4		23,000.00	4,791 13 4		12,500.00	2,604 3 4	
Public Works, Bureau of Navigation, including Naval Acad.	3,116,420.00	649,254 11 8		3,058,170.00	637,117 18 4		350,000.00	72,916 13 4	
Public Works, Ordnance	805,400.00	178,416 13 4		318,100.00	66,270 16 8		—	—	
Bureau of Medicine and Surgery	266,000.00	52,708 9 8		205,000.00	42,708 6 8		220,000.00	45,833 6 8	
Bureau of Supplies & Accounts	4,483,849.28	934,135 4 2		3,543,849.28	738,301 17 6		2,731,252.03	569,066 13 4	
Bureau Construction and Repair	8,070,824.25	1,681,421 13 4		7,360,824.25	1,533,565 0 0		6,255,824.25	1,299,430 0 0	
Bureau of Steam Engineering	3,772,900.00	784,354 3 4		3,462,900.00	721,437 10 0		2,774,300.00	577,979 3 4	
Naval Academy	219,575.45	45,714 15 10		202,115.45	42,107 5 10		191,885.45	40,691 0 0	
Marine Corps	2,918,529.27	524,691 13 4		2,713,529.27	565,316 13 4		2,712,870.27	565,181 5 10	
Increase of Navy	26,172,917.00	5,452,691 0 10		25,400,000.00	5,208,333 6 8		21,140,699.00	4,604,331 17 9	

Under this heading there is a new item providing that warrant officers shall receive the same commutation for quarters as second lieutenants of the Marine Corps.

Under "Pay, miscellaneous," the appropriation proposed in this Bill is increased by \$100,000 (£20,833 6s. 8d.), due to the enlarged Navy. The contingent item is reduced, and the emergency fund is increased to \$500,000 (£101,166 13s. 4d.), owing to the unsettled state of affairs in the Far East.

There are two provisions of law following the emergency clause, namely, a provision for inspection of naval accounts, and also for assistant chiefs of the bureaus of Equipment, Steam Engineering, Construction and Repair, and Yards and Docks, which at the present time have no assistant chiefs.

The item for transportation and recruiting has been increased 720,000, which is due to the expenses of recruiting more men and the transportation of large numbers to the Asiatic stations. The other items under the Bureau of Navigation, with the exception of new buildings at the naval training stations in California and Rhode Island, transferred to public works, are the same as those of last year.

The increase in the appropriations for ordnance amount to less than \$200,000 (£41,666 13s. 4d.), and is due to the necessity for new machinery at the Washington Gun Factory, and for tools, etc. There is a provision for a new and improved battery for the "Baltimore," which will cost \$175,000 (£36,458 6s. 8d.). There is also a provision of \$100,000 (£20,833 6s. 8d.) for supplying the 3,000 additional men of the Marine Corps with the Army rifle.

The amount of money expended during the last fiscal year for coal alone amounted to more than \$1,500,000 (£312,500). The appropriation for depôts of coal has been reduced from \$700,000 (£145,833 6s. 8d.) to \$400,000 (£83,333 6s. 8d.); \$300,000 (£62,500) of the appropriation made last year was for the purpose of establishing coal-sheds and wharf at Cavité. The other items under the Bureau of Equipment are practically the same as last year.

The estimates for public works call for the large sum of \$12,000,000 (£2,500,000). The Committee concluded that it would be unwise to expend more than about one-half of this sum this year, in view of the fact that last year more than \$8,000,000 (£1,666,666 13s. 4d.) was appropriated for improvements which have not yet been completed. It is believed that the construction of new buildings interferes largely with the regular business of the yards and that it was not wise to increase the amount more than was necessary to maintain their high efficiency. A million dollars of the amount carried under public works is appropriated toward the completion of the four dry docks. The floating dock at Algiers will be completed the coming spring. \$300,000 (£62,500) has been appropriated toward the dry dock at New York, and \$300,000 (£62,500) toward the dry dock at Norfolk, Va.

The Committee recommends this year an appropriation of \$3,000,000 (£625,000) toward the rebuilding of the Naval Academy, in addition to the \$1,570,000 (£327,091 13s. 4d.) already appropriated. The Secretary of the Navy has approved plans for carrying this work into effect. The work upon the armoury and boat-house has gone on, and it is likely that the armoury will be completed next June. The boat-house will not be completed for a year.

The increase for Construction and Repairs is approximately \$1,125,000 (£231,375), due to the fact that our vessels are increasing in number. It is to be expected that this item will increase year by year.

The increase for the Bureau of Steam Engineering is \$688,600 (£143,458 6s. 8d.), upon very explicit testimony of the chief, that in view of our ships abroad, our expenses are greater than ever. The major portion of expenditures of this Bureau is in the hands of captains and commanders of the fleet in the Far East. Last year there was a deficiency of about \$500,000 (£101,166 13s. 4d.).

The appropriations for the Naval Academy are practically the same as those of last year, there being but a slight increase in repairs of \$5,000 (£1,027 7s. 6d.), made necessary for the erection of a wooden addition to the main quarters for accommodating the cadets during the rebuilding of the institution. Further increase of \$1,500

(£308 4s. 3d.) is requested for the construction of catboats for special instruction for the cadets. In order to supply officers for the present emergency, it is provided that the two classes now at sea, which have completed their four years' course at the Naval Academy, shall be commissioned at once, and that the class completing its four years' course at the Academy this coming June be commissioned thereupon.

The appropriations for the Marine Corps differ but little from those of last year, the totals being practically the same.

Increase of the Navy.—This is the last general heading of the Naval Appropriation Bill, and one which appeals more strongly to the interest and sentiment of the people. It will be observed by an examination of the following table that the Committee has recommended an appropriation to the full amount of the Estimates asked for by the Department.

	Estimates, 1902.				Carried by Bill.				Appropriated, 1901.			
	\$	£	s.	d.	\$	£	s.	d.	\$	£	s.	d.
Construction and machinery	21,773,817	4,326,211	17	6	21,000,000	4,375,000	0	0	12,740,699	2,470,970	0	0
Armour and armament	4,000,000	833,333	6	8	4,000,000	833,333	6	8	4,000,000	833,333	6	8
Armour-plate factory	...	...	...	...	...	...	...	...	4,000,000	833,333	6	8
Equipment	400,000	83,333	6	8	400,000	83,333	6	8	400,000	83,333	6	8
Total	26,173,817	5,452,878	10	10	25,400,000	5,291,666	13	4	21,140,699	4,420,970	0	0

The large increase over that of last year's Bill is to be found under the increase of the Navy. We have at the present time a large number of ships under construction more than at any other period of the building of the New Navy.

The Committee also provides, under the increase of the Navy, an appropriation of \$4,000,000 (£833,333 6s. 8d.) for armour and armament for ships now under construction. The Secretary of the Navy has contracted for 36,810 tons of armour for all of the ships heretofore authorised by Congress at the price of \$420 (£80 15s. 0d.) per ton, plus the Krupp royalty, not to exceed \$24.32 (£5) a ton, and the Harvey royalty, not to exceed \$11.20 (£2 5s. 8d.) per ton. The price of the Harvey armour was agreed upon at \$400 (£83 6s. 8d.) per ton, the same as heretofore. It ought to be a matter of general congratulation that the armour-plate question has been settled through the skill, firmness, and excellent judgment of the Secretary of the Navy in carrying out the evident purposes of Congress.

The Committee recommends building by contract two unsheathed sea-going battle-ships, carrying the heaviest armour and the most powerful ordnance for vessels of their class, upon a trial displacement of about 14,000 tons each, to have the highest practicable speed and great radius of action, and to cost, exclusive of armour and armament, not exceeding \$3,850,000 (£802,083 6s. 8d.) each, and two unsheathed armoured cruisers, carrying the heaviest armour and most powerful ordnance for vessels of their class, upon a trial displacement of about 14,000 tons each, and to have the highest practicable speed and great radius of action, and to cost, exclusive of armour and armament, not exceeding \$4,000,000 (£833,333 6s. 8d.) each. Maximum cost of the vessels herein authorised, exclusive of armour and armament, will be \$15,700,000 (£3,229,166 13s. 4d.).

The department has recently contracted for the construction of the five battle-ships and six armoured cruisers authorised by the Acts of 3rd March, 1899, and 7th June, 1900, at a cost approximated at \$40,000,000 (£8,333,333 6s. 8d.). On 1st February bids will be opened for the three protected cruisers authorised by the Act of 7th June, 1900. In view of the fact that the shipyards of the country were likely to be well filled with work during the coming year in consequence of the recent letting of these large contracts, the Committee thought that the above programme was one that would be considered adequate and would meet the approval of Congress in its policy of building up the Navy.

Our Navy at the present time, including all ships, as well as those under construction, is shown by the following summary :—First-class battle-ships, 14 ; first-class

battle-ships, sheathed, 3; second-class battle-ship, 1; armoured cruisers, 5; armoured cruisers, sheathed, 3; armoured ram, 1; steel single-turret monitors, 4; double-turret monitors, 6; iron single-turret monitors, 8; protected cruisers, 15; protected cruisers, sheathed, 8; unprotected cruisers, 4; gun-boats, 14; light-draught gun-boats, 3; composite gun-boats, 6; training-ship (Naval Academy), sheathed, 1; special class, 2; gun-boats under 500 tons, 22; torpedo-boat destroyers, 16; steel torpedo-boats, 35; submarine torpedo-boats, 8; wooden torpedo-boat, 1; iron cruising vessels, 5; wooden cruising vessels, 7; sailing vessels, wooden, 6; tugs, 39; wooden steam vessels unfit for sea service, 11; wooden sailing vessels unfit for sea service, 6. Total number of vessels in Regular Navy, 254.

Auxiliary cruisers, 6; converted yachts, 23; colliers, 16; special class, 11.

\$25,000 (£5,208 6s. 8d.) is appropriated for the conversion of 6-inch guns to rapid-fire, \$500,000 (£104,166 13s. 4d.) for smokeless powder, \$150,000 (£31,250) for new machinery for the Washington Navy Yard. \$18,000 (£3,750) for more land at Indian Head. The naval station at San Juan, Porto Rico, gets \$42,580 (£8,870 16s. 8d.), that at Hawaii \$172,047.25 (£35,842 14s. 2d.), that at Cavité \$2,165 (£151 0s. 10d.), and that at Tutuila \$225,000 (£468,750). The torpedo station at Newport is to have a new building to cost \$25,000 (£5,208 6s. 8d.).

\$60,000 (£1,250) is provided for the State Naval Militia, \$100,000 (£20,833 6s. 8d.) for ocean and lake survey.

MILITARY NOTES.

PRINCIPAL APPOINTMENTS AND PROMOTIONS DURING APRIL, 1901.

Colonel (temporary Brigadier-General) H. H. Settle, C.B., D.S.O., to be Inspector-General, Lines of Communication, South Africa, with the local rank of Major-General whilst so employed, and to be graded as a Major-General on the Staff. Lieut.-Colonel C. B. H. Wolseley-Jenkins, 19th Hussars, to be Colonel. Lieut.-Colonel J. M. Hunt, the Queen's Own Cameron Highlanders, to be Colonel. Lieut.-Colonel H. H. Muirhead, R.E., to be Colonel. Lieut.-Colonel A. L. Lane, R.G.A., to be Colonel. Lieut.-Colonel H. H. Pengree, to be Colonel. To be Lieut.-Generals for Distinguished Service in the Field:—Major-General (local Lieut.-General) T. Kelly-Kenny, C.B., Major-General (local Lieut.-General) Sir A. Hunter, K.C.B., D.S.O., Major-General (local Lieut.-General) the Hon. Sir N. G. Lyttelton, C.B. To be Major-Generals for Distinguished Service in the Field:—Colonel (local Lieut.-General) I. S. M. Hamilton, C.B., D.S.O.; Colonel (local Major-General) C. E. Knox; Colonel (local Major-General) Sir W. G. Nicholson, K.C.B., R.E.; Colonel (local Major-General) A. S. Wynne, C.B.; Colonel (local Major-General) C. W. H. Douglas, A.D.C.; Lieut.-Colonel and Brevet Colonel (local Major-General) H. L. Smith-Dorrien, D.S.O.; Lieut.-Colonel and Brevet Colonel (local Major-General) W. F. Kitchener, the Prince of Wales's Own (West Yorkshire Regiment); Colonel (local Major-General) D. M. B. H., Earl of Dundonald, C.B., M.V.O.; Lieut.-Colonel and Colonel (local Major-General) A. H. Paget, Scots Guards; Major and Brevet Colonel (local Major-General) B. M. Hamilton, the East Yorkshire Regiment.

Lieut.-Colonel the Hon. M. G. Talbot, R.E., to be Colonel. Major and Brevet Lieut.-Colonel F. J. Nason, D.S.O., the Cameronians (Scottish Rifles), to be Colonel. Major and Brevet Lieut.-Colonel C. Fergusson, D.S.O., Grenadier Guards, to be Colonel. Colonel W. J. Vonsden, V.C., C.B., I.S.C., is granted the local rank of Major-General in India whilst officiating in command of the Punjab Frontier Force.

HOME.—The annual report of the Inspector-General of Recruiting, recently issued as a Parliamentary Paper, is of exceptional interest. The Inspector-General states that the total number of recruits enlisted during the year amounted to 98,361, against 42,709 of the previous year. The total is made up as follows:—

Household Cavalry (including 58 reservists)	...	...	370
Cavalry of the Line (including 1,533 reservists)	...	...	8,335
Imperial Yeomanry	...	...	10,242
Royal Artillery, Horse and Field (including 1,666 reservists)	...	...	9,667
Royal Garrison Artillery (including 1,343 reservists)	...	...	4,406
Royal Engineers (including 446 reservists)	...	...	3,121
Foot Guards (including 638 reservists)	...	...	3,112
Infantry of the Line (ordinary recruits, 22,500; enlisted for one year, 10,568; Royal Reservists, 17,956; and ex-soldiers enlisted, 383)	...	...	51,407
Colonial Corps	...	...	1,560
City of London Imperial Volunteers	...	...	1,664
Army Service Corps (including 101 reservists)	...	...	1,923
Army Ordnance Corps (including 113 reservists)	...	...	479
Royal Army Medical Corps (including 268 reservists)	...	...	1,832
Army Pay Corps	...	...	8
Army Post Office Corps	...	...	235
Total			98,361

As regards the Militia, 37,853 recruits joined, as compared with 40,653 in 1899. The falling off, it is thought, may be partly attributed to the Militia embodiment, and the consequent absence of the whole of the permanent staff. The increased demand for labour has also been a factor in the case, and the reduction of the standard for the Regular Army will also have affected the Militia. The number of Militiamen who joined the Regular Army was 10,715, as compared with 13,518 in 1899, and the number joining the Royal Navy or Royal Marines was 247 as compared with 722 the previous year. The Inspector-General remarks that the past year has been an exceptional one in the large increases made in the Regular forces of the country, some of which are of a permanent character, whilst others are the result of the war in South Africa, and are temporary. The R.H.A. has been increased from 21 to 28 batteries, the R.F.A. has been increased from 103 to 148 batteries, the R.F.A. depôts have been increased by 2, making their number up to 7. In March last, Her late Majesty the Queen, to commemorate the bravery shown by the Irish regiments in South Africa, was graciously pleased to command that an Irish regiment of Foot Guards should be formed. An increase of 2 battalions has been sanctioned for each of the under-mentioned regiments :—

The Northumberland Fusiliers.
 The Liverpool Regiment.
 The Worcestershire Regiment.
 The Middlesex Regiment.
 The Manchester Regiment.

The report states that recruiting in the United Kingdom has improved, with the exception of Ireland, but the situation from a recruiting point of view cannot, as a whole, be considered satisfactory. In spite of the war, recruiting for the infantry has not met the demand. This is undoubtedly due to the diversion of recruits to other arms. In connection with this subject there is presumptive ground for assuming that the formation of the Irish Guards is taking place at the expense of recruiting for the Scots Guards in the large towns of Scotland.

Though the numbers enlisting have steadily increased, the time is a long way off before the supply becomes greater than the demand. Sentiment largely enters into the matter of recruiting, and it was noticed during the present war that when individual regiments particularly distinguished themselves, the supply of recruits for those regiments at once increased. From a perusal of the annual reports on recruiting from officers commanding the various recruiting districts, it is found that there are a large number of towns, from 5,000 to 25,000 inhabitants, which are shown as producing no recruits during the year. It is presumed that recruits from these towns, in order to avoid the fact of their enlistment being known to their friends, have joined at neighbouring large towns. The proportion of well-educated men who enlisted in the Army during the past five years has risen from 69 to 83 per 1,000. It is from this class that the War Office looks to find the best non-commissioned officers. It is a regrettable fact that in some districts enlistment in the Army is not looked upon with favour by the parents of the class of young men most fitted for a successful career in the Army. A return is given showing the strength on 1st January for the past 11 years of the Regular Army, Army Reserve, Militia, Yeomanry, and Volunteers. The total amounts, on 1st January, 1901, to 791,503. In conclusion, the Inspector-General draws attention to the remarkable results which attended the recruiting operations during 1900. Previously the highest number of recruits raised for the Regular Army since the introduction of the short-service system was 42,700, obtained in 1899, but last year that number was more than doubled. No less than 49,260 ordinary recruits joined, in addition to 24,449 Imperial Yeomen, Volunteers, etc.; 24,130 Royal Reservists, and 522 ex-soldiers, making a grand total of 98,361.

CANADA.—The Secretary of State for the Colonies has forwarded a return to the Militia Department at Ottawa showing the numerical strength of the contingents sent to South Africa by the various Colonies of the Empire. The figures are as follows :—

Colony.	Officers.	Men.
Canada	135	2,924
New South Wales	137	2,503
Victoria	81	1,348
Queensland	69	1,058
South Australia	31	543
West Australia	24	450
Tasmania	14	288
New Zealand	82	1,705
Total... ..	573	10,819

In addition to the foregoing, there was a corps of Imperial Bushmen, consisting of 35 officers and 1,050 men, and a composite regiment of 10 officers and 240 men. These, in the absence of information cannot be classed under the separate Colonies to which they belong, but their inclusion with the other contingents would swell the total Colonial force to 638 officers and 12,109 men. The same return states the number of Colonial officers and men serving in South Africa on 12th March last to have been as follows :—

Colony.	Officers.	Men.
Canada	3	114
New South Wales	38	750
Victoria	25	600
Queensland	30	500
South Australia	6	300
West Australia	10	300
Tasmania	6	200
New Zealand	63	1,129
Total... ..	181	3,893

—*The Canadian Military Gazette.*

INDIA.—Mr. Findlay, Financial Secretary to the Government of India, in his Memorandum on the Estimates, gives the following account of the new military works and marine expenditure :—

The expenditure on Imperial military works in India is expected to be less than the Budget Estimate by 10,09,000 rupees, while that in England has been increased by 3,84,000 rupees. The grant of the year was increased by 2,20,000 rupees, transferred from the Military Estimates for expenditure on certain mobilisation works, but a lapse of 7,48,000 rupees on the total grant is anticipated. A special addition of 17,75,000 rupees has been made to the Budget grant for 1901-02 : this is part of the large new expenditure sanctioned to increase the efficiency of the Army. It is given for the following purposes :—

	Rupees.
The new cordite factory (in addition to two lakhs provided from the ordinary grant)	6,00,000
The new gun carriage factory (in addition to two lakhs from the ordinary grant)	2,20,000
Mounted infantry schools	2,50,000
Accommodation for a third howitzer battery	5,00,000
Coast-defence electric lights	75,000
A new small arms factory	50,000
Accommodation for increase in <i>personnel</i> of the submarine mining establishment in India	80,000

With regard to the expenditure in 1900-1901, it may be mentioned that from the large savings that have accrued by the absence of the Indian contingents in South Africa and China the Government of India have sanctioned special new expenditure with the object of improving the efficiency of the Army. Among the more important of these measures are the following :—

Purchase of six batteries of German guns and an additional 20,000 Lee-Enfield rifles, at a cost of £262,000.

Three hundred artillery horses have been procured for £18,000.

The equipment of four general hospitals of the Field Army has been completed, at a cost of £9,000.

£10,000 have been incurred for ten miles of light tramway material and for railway sidings and water supply arrangements at rest-camps.

£24,000 have been spent on light railway material.

The acquisition of land for tactical instruction has cost £6,000.

The grant of compensation to Australian shippers of horses has cost £10,000, and bounties to British soldiers extending their colour service has involved an expenditure of £15,000.

£12,000 have been spent on account of the addition of a howitzer battery to the Field Artillery in India and £7,000 on temporarily increasing the Native Army Reserves.

The total cost of all these measures exceeds £425,000.

With regard to the expenditure of next year, I may state first the causes of increase which are beyond the control of the Government of India. In the Budget for next year it has been assumed that there will be no savings owing to the despatch of troops out of India without replacement, and as compared with the current year's Budget there will be an increase of £316,000 on this account. The rise in price of metals and home stores accounts for an increase of about £100,000. The abatement of famine in many parts of the country gives, on the other hand, a reduction of £267,000, so that the net addition to the expenditure due to unavoidable causes may be approximately taken at £149,000.

The Government of India has also deemed it necessary to sanction several measures involving new expenditure for the improvement of the efficiency of the Army. Foremost comes the re-armament of the Native Army, for which £395,000 have been provided. £105,000 have been set aside for the re-organisation of the Transport service.

The purchase of eighty-one Maxim guns for the Field Army and coast defences will cost about £34,000, and the purchase of new 10-pounder guns for mountain batteries in India will cost £27,000.

The addition of two howitzer batteries to the Field Army and of one company of Royal Garrison Artillery accounts for an increase of £79,000.

The formation of five schools for mounted infantry in India will involve an expenditure of £43,000, while £26,000 represent the increase due to the addition of one British officer per regiment of Native Infantry in India and of eight officers for the Commissariat-Transport Department.

Provision has also been made for the following :—

Two 6-inch B.L. guns for the re-armament of Choki Point battery, £11,000 ; purchase of eighteen machine guns of different patterns for trial, £8,000 ; provision of Grenfell sights for the Field Artillery, £8,000 ; improvement of the equipment of field batteries and ammunition column units in India, £18,000 ; provision of cordite ammunition for 6-inch B.L. guns of coast defences, £8,000 ; for increasing the popularity and improving the efficiency of the Volunteer forces in India, £7,000 ; Bandolier equipment for the Field Army, £13,000 ; augmentation of the submarine mining establishments, £7,000 ; and the purchase of 294 horses for the artillery, £25,000.

The total cost of the measures involving new expenditure exceeds £944,000 in addition to £118,000 provided in the Military Works Estimates.—*Pioneer Mail*.

AUSTRIA-HUNGARY.—The *Vedette* has recently published an article on the slowness of promotion of officers in the Austrian field artillery. Some of the comparisons and observations contained in this article appear worthy of mention. The promotion of officers of the field artillery, says that journal, is far slower than in other branches of the Service. At the same time it is well known that these officers are neither less capable, less active, nor less intelligent, than the others. It would be as well, therefore, if the attention of the military authorities were drawn to the present deplorable state of affairs. At the last promotions some lieutenants, promoted to first lieutenants, had been cadets for from four to five years, then all had served as lieutenants for four years, and they must now put in from eight and a half to nine years as first lieutenants before they can expect promotion, and it is, therefore, not until after seventeen years' service that they can reach the rank of captain. In this latter rank officers must wait for twelve or more years before being promoted majors, so that it is impossible to attain the latter rank until after twenty-seven years' service. All, even first lieutenants, grow grey during this long waiting; further, these bad promotion arrangements have an unfortunate effect on the sons of officers who may be thinking of a military career. The discouraging example of their fathers deters them from following the profession of arms.

In other branches of the Service officers who join as cadets are captains after fourteen and majors after twenty-three years' service as officers. Between officers of fortress and those of field artillery there is also a difference disadvantageous to the latter. The former are appointed from one to one and a half years earlier than the latter, although both come from the same instructional establishments. As regards former officers of field artillery, transferred to the military transport, they are already majors, whilst their class comrades who remain captains have still a long time further to serve in that rank. If one places oneself for a moment in the sad position of the field artillery officers, one can readily appreciate the bitterness of their feelings when they are obliged, as each period for promotion comes round, to see their comrades of other branches of the Service, junior to them in rank, and also naturally in age, promoted to the higher ranks, and thus gaining many years' seniority over them.

In spite of all these unfavourable circumstances, it is in this branch more especially that promotion out of proper turn is most remarkable. A mass of special promotions, like those that have taken place during the last three years in the artillery, to the rank of captain, and last year to the rank of major, conduces to the ruin of that arm, for such a proportion of special promotions utterly crushes the normal ones. These bad arrangements for promotion, and the enormous proportion of special promotions, exercise a most depressing effect on the spirit of the company officers, which is already shown by the premature resignations and retirements of a number of officers, of comparatively higher rank, and the difficulty of obtaining officers for this branch of the Service will daily become greater.

One reads in the *Armeebblatt* of the 1st May that the Minister of the Honved, in the Austro-Hungarian Parliament, demands 5,931,000 crowns (£237,560) for the manufacture of 55,000 Mannlicher rifles for the infantry, and 14,494 repeating carbines for the cavalry of the Landsturm. This credit advance is accounted for by the fact that, from the present date, all the men of the Landsturm will understand all the mechanism of the Mannlicher rifle. If there were not a sufficient quantity of these rifles in war-time, these men would have to be armed with old rifles, which would naturally cause great inconvenience. Further, it would be difficult to provide the brigades, which would be distributed amongst the field troops, with rifles different from those with which the latter are armed. At the present time the number of rifles demanded is necessary to arm the troops who, in the event of war, would be called out to reinforce the Active Army and the Honved. This measure has been expected for some considerable time, but its realisation has been hitherto postponed owing to financial difficulties. The Hungarian rifle manufactory had to suspend work and dismiss its workmen for want of orders.

BELGIUM.—Several ministerial councils have lately been held under the presidency of the King. The chief object of these meetings was the discussion of the military question, which has almost reached its solution. The mixed committee having adopted the conclusions of the sub-committee, it is practically certain that, with the exception of a few slight modifications, the Government will make them the basis of its scheme. The following are the principal points of the new scheme which the Government will lay before the Chamber :—

1. Obligatory service with the immunity for priests extended to novices of religious orders.
2. Military tax to be imposed on families in easy circumstances whose sons escape conscription.
3. Decreasing the period of service to 21 months for infantry, 24 for artillery, and to 30 for cavalry.
4. Various duties at present performed by the military to be undertaken by civilians.
5. The peace effective to be maintained with an increase of the contingent proportional to the decrease of the period of service, viz., 16,500 men for the first year, and 18,000 men for the following years.
6. Organisation of voluntary enlistment with entrance and exit examinations.—

La France Militaire.

FRANCE.—The musketry regulation empowers commanders of army corps to utilise, in default of camps of instruction and to avoid vexatious moves of troops, the most favourable ground to be found in the vicinity of garrisons for purposes of field firing. The military authorities are enjoined to communicate with municipalities or proprietors for the temporary occupation of the selected ground, and should choose, as far as possible, such periods of the year for these exercises as would occasion the least damage and the least annoyance to the inhabitants. As the application of this regulation met, in practice, with great difficulties, and as, on the other hand, the necessity for such practice grounds for the instruction of troops and cadres, increased every day, a law was passed by the Chamber and promulgated on the 17th April, 1901, which gives to military authorities the right to temporarily occupy private properties for purposes of field firing, and to prohibit access to them during the practice, except as regards houses, buildings, gardens, etc., on the property.

Indemnity should be allotted, as in the case of manœuvres, for injuries caused either by material damage or by privation of the enjoyment of the property occupied by the troops or forbidden to the inhabitants. These indemnities should, to avoid forfeiture, be claimed at the district mayoralty within three days of the departure of the troops.

A board attached to each army corps, or portion of an army corps acting independently, is charged with the assessment of these damages. If this assessment is accepted, the amount is paid on the spot. In the event of disagreement, the matter is referred to the district justice of the peace, who may award an amount up to 200 francs without the power of appeal and up to 1,500 francs with power of appeal. Anything above the latter amount has to go before a court of justice.

GERMANY.—The following translation of an article from the *Militär-Wochenblatt*, entitled "The Strategic Importance of Waterways generally and of those proposed by the Prussian Government in particular," has been contributed by Lieutenant M. H. C. Bird, R.G.A.

In the Prussian Diet just now, a bill is being discussed, dealing with the construction of the Rhine-Elbe Canal (demanded two years ago), the improvement of the waterway of the Lower Havel, the construction of a canal between Berlin and Hohensaathen on the Oder, and the completion of the waterways between the Oder and the Weichsel (Vistula). As is well known, the Government was induced to put

forward this bill through the desire to advance agricultural interests. But the proposed waterways will also possess great strategical importance.

1. The importance of waterways generally.

To cope with the necessities of military transport in war, all available means of communication must be utilised—railways, roads, and waterways.

Our experience in 1870-71 has proved this. At that time, military transport depended almost entirely on the capabilities of the railways. During the periods of mobilisation and concentration, that is to say, so long as troops had chiefly to be moved, they rendered excellent service. Later, whilst field operations were going on, stores (supplies, ammunition, and all sorts of repairing materials) had chiefly to be carried: these things take a long time to unload, and the railways often broke down. The reason was, that more trains arrived at the railheads than could be unloaded. This caused checks, which were felt far away in the middle of Germany: the troops suffered want, particularly of provisions, whilst large quantities went bad in the railway trucks; artillery stores arrived at the front weeks after they were wanted; and the transport back of wounded and prisoners was also delayed for weeks.

Since that time much has been done to prevent a similar state of affairs. Above all, the system of bringing up supplies has been altered. Near the theatre of war large stores are to be arranged, into which a continual stream of supplies from the different army corps districts at home is kept up, whilst the further conveyance to the field army—to the different railheads—is regulated according to necessity. Further, our railway system has been completed and its capabilities have been greatly increased, but the size and needs of the armies, and consequently the demands made on the communications, have increased much more. There is no doubt that in a future campaign the task of continually supplying all the wants of the army in the field, and, at the same time, keeping the theatre of war clear of all superfluous encumbrances, will be far more difficult than it was in the war of 1870-71. It is certainly the case that under normal conditions the railways will suffice for this task, but it is equally certain that under abnormal conditions—when a cessation of operations increases the necessity of supplies, when, at the same time, enormous quantities of artillery and engineer siege stores have to be brought up, and hundreds of thousands of prisoners, sick and wounded, have to be taken to the rear—then if railways alone are employed, checks and delays are even now by no means impossible. Such checks will impair the energy with which the operations are conducted and may determine the issue of the whole war.

These considerations have led us to the decision not to base our war transport entirely on our railways, but to relieve the strain on them by utilising the waterways.

No doubt waterways, especially canals, have various disadvantages. Transport on them is comparatively slow. By the destruction of locks, etc., their value is lost for some considerable time, work on them is periodically interrupted by repairs and frost. But these disadvantages are not great enough to make one forego the great advantages they offer. It is not intended to move troops by water, but articles which need not arrive at their destination within very close limits of time. Railways are also susceptible to damage, and throughout their whole length—canals only where engineering works exist. Moreover, all lines of communication must be guarded against destruction, and this is undoubtedly far easier for canals than for railways. Repairs are usually commenced before they become absolutely necessary, so that in most cases it will be possible to postpone them for a year when war has broken out or may be expected. Lastly, as to frost, it is true that in a hard winter we may for six or eight weeks have to rely on the railways alone,¹ and then the fear of overworking the railways may cause operations to be confined within such limits that supplies for the troops may not be reduced below the absolute minimum. But the enemy will be in the same plight, as his waterways will be frozen too.

From their very nature, waterways will be mainly employed in the transport of very bulky goods. They would be used for supplying our fortresses with the necessary

¹A good deal of transport might be done with sledges if the necessary preparations are made beforehand.—TRANSLATOR.

stores for preparation for siege, for keeping up the constant supply of food, ammunition, and stores of all kinds to the depôts to be established in rear of the field army, from which, as a rule, they would be forwarded to wherever they were wanted by rail, convoy, or, if convenient, by water. For keeping the depôts constantly full, waterways are even more suitable than railways. For every train must be emptied on arrival, so as to make room for the next; but the lighters can be allowed to accumulate in considerable numbers in the depôt harbour till their contents are transferred to trains or convoys, without fear of blocking the traffic immediately.¹ It is also intended to use the waterways for the transport of sick and wounded, for which they are very suitable, for ships can easily and cheaply be provided with hospital arrangements. The hospital trains, of which there are only a few, owing to their great cost, would not be able to clear the field and base hospitals quickly enough.

The more of this kind of transport is taken from the railways and transferred to the waterways, the quicker will be the mobilisation and concentration, and the more certainly will the railways be able to cope with the transport left to them during the progress of operations, and the more likely are they to be available for any sudden and unexpected movement of troops. This latter point is particularly important for us, since, in a future war, we must be prepared to meet attacks from several sides at once. Private commerce is also to derive some benefit from this relief of the railways. That this point is considered is not due to reasons of pure humanity, but to the fact that the national business (commerce, trade, industry, and agriculture) is the most copious source of means for carrying on war, and that it would quickly fall off if its most important means of communication were stopped. Private traffic is therefore not to be excluded from the waterways, and is to be re-admitted to the railways to the fullest possible extent, as soon as the concentration is complete.

2. The strategic importance of the waterways proposed by the Government.

After the above discussion, there is hardly any necessity to prove that the proposed waterways will be of the utmost value to us in a future war. They join up all the rivers flowing through Prussian territory into the North Sea and Baltic. When they are completed, we shall possess a connected system of water communication of great carrying capacity, which, with its extensive ramifications, covers almost the whole State of Prussia. Barges, which can carry more than a whole train, will be able to go from Memel, Posen, and Breslau to the Rhine without unloading. We shall be able to convoy all the warlike produce of the whole of Prussia, by water, in the case of a war in the West, to the depôts on the Rhine; in case of one in the East, to those on the Weichsel, Warthe, and Oder. And if our coasts are threatened, the new waterways will mark the line on which we must establish the depôts from which the forces detailed to defend our coasts will draw their supplies; and by water all their warlike stores will be conveyed to Emden, Bremerhaven, Brunsbüttel, Kiel, Lübeck, Stettin, Danzig, or Königsberg. The proposed communications will therefore represent, on the one hand, a line of supply for our base on the West—the Rhine—or East—Weichsel, Warthe, and Oder; and, on the other hand, our base itself, for the defence of our coasts.

But the new waterways are not only important for the Army; they—particularly the Rhine-Elbe Canal—are also particularly important for the Navy. Even now the regular coal supply of our naval bases gives our railways a great deal of work, and with the continual growth of the Navy the strain on them will continually increase.

The waterways demanded by the Prussian Government promise therefore, in the most complete way imaginable, a great relief to our railways, and all the advantages arising from it. They will afford very material assistance in keeping the business of the nation going during war, and their construction will therefore greatly assist the active and passive defence of the country.

RUSSIA.—The *Russkii Invalid* gives the new conditions for the marriage of Russian officers as laid down in an order of the 1st April, 1901. According to the new

¹ This does not seem quite clear. Possible scarcity of barges does not appear to have come into the author's calculations.—TRANSLATOR.

regulations, final authority to marry rests with the divisional commander. Application to marry is made through the commander of the regiment or head of the department to which the applicant belongs, and if the former has no objection, he forwards it to the commander of the division for his approval. The *fiancée* must be well educated and morally above suspicion; her social status is also taken into consideration.

In order to obtain the necessary authority to marry, officers on the active list must be at least 23 years old. If they are in receipt of less than 1,200 roubles annually for pay and allowances, they must certify that they are either in the enjoyment of an income of at least 300 roubles, or are possessed of a capital of 5,000 roubles. Should this be the case, permission to marry cannot be given until they have served for at least two years in the corps or department to which they belong at the time of application, and should they have a capital of 5,000 roubles, they may not spend more than 300 roubles annually, including interest. Officers serving in the Amour or Kwantoun districts are not obliged to prove the possession of an annual income in addition to their pay. Officers who fail to comply with these regulations are liable to disciplinary punishment and are deprived of certain rights. The new regulation will come into force on the 14th January, 1902.

A Russian ministerial order lays down, as a tentative measure, the formation of 5 infantry machine gun companies. They will be attached in Europe to the 4th, 6th, 8th, and 16th Infantry Divisions, and in the Far East to the 3rd East Siberian Rifle Brigade. The *personnel* of these companies will be recruited from the division; in Europe they will be upon a peace footing, that at Kwan-tung on a war footing. Officers and men of the artillery will be temporarily attached to the infantry divisions as instructors. The provisional effective establishment will undergo a revision after a 3 years' trial.

In 1900 Russia despatched 8 machine-gun batteries to China, which were attached, 2 to each of the 4 army corps in the Far East.

Russia is merely following the example of Germany. At the same time the voice of General Dragomiroff has been raised for many years against the employment of the machine gun in European wars. In the opinion of that high authority, they are only useful against an uncivilised and undisciplined enemy.

SERBIA.—The Servian infantry has, as is known, been newly re-organised. Hitherto it has consisted of 5 brigades of 3 regiments of 4 battalions each, making a total of 60 battalions, which have been numbered successively from 1 to 60. In future, however, the 15 regiments will be doubled and made up to 30, and each 2 of the new regiments will be brigaded together. A brigade consequently now consists only of 4 battalions, and there are now 15 brigades made up of 2 regiments of 2 battalions each. At the same time the battalions will be renumbered throughout, and the battalions of each regiment will in future bear the numbers 1 and 2. In connection with this new organisation, it has been arranged that the present 15 regimental district commands shall be changed into brigade district commands for recruiting purposes. The *Servian Military Journal* states that the new organisation takes effect from the 15th March of the present year. It follows that the 1st and 16th Regiments will belong to the 1st Brigade, the 2nd and 17th to the 2nd Brigade, and so on. The new organisation does not carry with it any increase in the number of the infantry but merely augments the number of commands. It, however, considerably simplifies the transition of the Army from peace to a war footing.

SWEDEN.—Some foreign Armies have not given up the idea of providing their troops, especially infantry, with cuirasses or shields proof against repeating rifles. A series of experiments have recently been carried out in the arsenal at Karlskrone, on the Baltic, with a new cuirass made of a substance similar to papier-maché, which is both remarkably strong and very light. Its inventor is an engineer employed in the works at Katrinefors. The experiments were carried out, with undoubted success, in the presence of the Inspector-General of Artillery and several officers of the Swedish

General Staff. The trials were conducted with the Krag-Jorgensen, model 1893, the new cavalry Mauser carbine and the Nagant ordnance revolver. Whatever the distance or the angle of fire, the projectiles of none of these weapons were able to penetrate a revetment of this hardened paper material. The latter was 72 millimetres (about 3 inches) thick, but it is hoped by means of a secret process to obtain the same results with a cuirass of greatly reduced thickness.

In order to penetrate the paper, use had to be made of naval Nordenfeldt guns, and then the effect was precisely similar to that produced by the same projectiles on a steel armoured plate. These results were noted by the officers detailed to follow the experiments, and it is possible that the new cuirass will be used not only for infantry but as a revetment for artillery works and for coast defence.—*La France Militaire*.

TURKEY.—The Turkish Minister of War, with the object of raising the standard of intelligence amongst the officers, decided last year to increase the number of the officers to undergo the course at the Military School, the number of the officers of the General Staff, and that of the officers going through the Staff College course. Hitherto young men leaving the military, the artillery, and the engineer schools, who passed out highest, to the number of from fifteen to twenty each year, entered the Staff College, and on leaving the latter were nominated to the General Staff. On entering the college they were at once given the rank of lieutenant, whilst their comrades of the same branch of the Service, joined their regiments as sub-lieutenants only. After three years' study the former left the Staff College with the rank of captain and were appointed to the General Staff.

The future fifty officers, instead of from fifteen to twenty, will enter the Staff College, but only with the rank of sub-lieutenant. After passing the first examination they will be promoted lieutenants with the authority to wear a yellow star, as a distinctive badge, on the collar. Those who pass a satisfactory examination at the end of the third year, on leaving the college, will be appointed captains, and, as such, will be sent to various branches of the Service other than their own. They will serve with them for two years and will then be promoted majors. It is only as field officers that they will be given employment on the General Staff. Pupils of the third year who fail to satisfy the examiners will be sent back to their regiments as lieutenants.

This new organisation encourages, on the one hand, emulation amongst officers, and, on the other, tends to make Staff officers more familiar with regimental work than they have hitherto been. Finally, it will have the effect of raising the intellectual standard of the regimental officer.—*Revue du Cercle Militaire*.

CORRESPONDENCE.

VOLLEYS *versus* INDEPENDENT.

To the Editor of the JOURNAL OF THE ROYAL UNITED SERVICE INSTITUTION.

SIR,—Since the musketry, as well as all other training of the soldier, is undergoing revision at the present time, and the relative merits or demerits of volley and independent firing are again before us, I would venture to put forward a few arguments for the former and offer a suggestion: for in spite of all the so-called "Lessons of the Boer War," it appears to me that volley firing has too many real advantages to be as entirely abolished in our Army as so many officers have advocated since their return from South Africa. With the sole exception of Colonel Mackinnon (lately in command of the C.I.V.'s), every officer who has spoken in public since his return from the Cape has, as far as I know, given it as his opinion that in future wars independent firing will alone be possible, and that the day for volleys, as for close-order formations, is past.

To begin with, it will be granted that our soldiers, although possibly better trained and disciplined than those of the Continental nations, will still be *young* soldiers of short service. Now, imagine these young soldiers, trained in peace-time to fire absolutely independently, going on service. Ordered to advance to the attack of a position well held by Regular troops, they hear for the first (or the twentieth) time the enemy's bullets whistling past their ears and striking the ground near them! They are widely extended (as is imperative nowadays) and practically free from control when once committed to the attack. As our soldier advances towards the enemy's position, fire is opened upon him, but exactly from where he cannot tell for certain, as the enemy is under cover and probably cannot be seen. However, Tommy has a well-filled pouch on his belt and a rifle in his hands which he understands and has often used with effect at targets on a range. So he throws himself down behind a rock or a bank, loads his rifle and fires at an enemy if he can see one, or at any rate at the stone or cover behind which he imagines there is one. He has also most probably been taught to judge the distance for himself, and adjust the sights of his rifle accordingly; even if he relies on his immediate commander for this information, the distances will nearly always be guessed, as it is practically impossible for range-finders to stand up exposed to modern musketry in order to ascertain the correct distance.

Men on either side of him have commenced firing and he sees the bullets of the attacking line strike, some near the mark, some before, and some behind; but he has no idea which is his own particular bullet, and consequently cannot tell in the least if the distance has been judged correctly, particularly should the bullets fall without raising any dust. However, he does not trouble himself long about the range. All he knows is that the enemy's bullets are falling uncomfortably close, he jams in another round and fires again and yet again, quicker and quicker, growing more careless with each shot, for not being able to see the enemy, how can he tell the result of his fire? So he goes on advancing and firing, until suddenly he discovers that his ammunition is nearly exhausted. What is he to do? Oh, it does not take Tommy Atkins long to decide a question like that! Down he goes under the best bit of cover handy, and yells for

ammunition. And until more ammunition comes up, he and the other soldiers in the same condition as himself cannot go on, with the result that perhaps at a critical moment of the attack the whole line comes to a standstill.

Now this sort of thing is all very well out in South Africa, fighting an enemy who rarely, if ever, makes a counter-attack; but what would happen if it occurred when fighting against an Army of professional soldiers led by good officers? An Army that had probably taken to the defensive in order to assume the offensive with more effect, one whose position was not so difficult to attack as his counter-stroke to ward off! Would *he* be content to remain quietly behind his trenches until the pouches of our men had been refilled, and they were ready to resume the advance?

The gradual cessation of fire could only mean one thing. This would be the moment an experienced and able general would choose for the counter-stroke. The advancing lines of the enemy would throw the helpless firing line back, broken and dispersed, on the second and third lines, who, if able to check the enemy, might ward off defeat and disaster, or be themselves swept back and routed.

This is what will happen if we leave to our men the absolute control of their ammunition.

It cannot be expected of section commanders to supervise and control the firing of every man in a section of fifteen or twenty men widely extended, each firing according to his own sweet will, as often as he pleases and at what he pleases; much less can it be expected of the officers. Of course it will be answered that there are two ammunition carts and two mules that follow a battalion into action, and that each company has a non-commissioned officer and a couple of privates, whose sole duty is to keep the men of their company supplied with ammunition. But the carts and mules must be left far in the rear when bullets kill at two miles, and ammunition carriers are only able to carry 600 rounds apiece; a simple calculation of the amount each carries, the distance to and fro he has to go, and the time he takes to do it, will show even those who have not had the actual experience of it in war what very little use they are in keeping a whole company supplied, not to mention the likelihood of the carriers being killed, as they must be continually on the move, traversing the most dangerous part of a battle-field—the ground immediately behind the firing line.

It must be remembered that in these days attacks generally last from dawn to dusk, and that a soldier could easily expend the whole of the 150 rounds he carries in one hour. He probably *will* expend it in two or two and a half hours if the fight is strongly contested, for it is the natural impulse of a man to fire if he is fired at, and if the enemy's bullets are coming fast and close he will fire very rapidly.

Has not this exhaustion of ammunition been the cause of a great number of those unfortunate surrenders in South Africa when, instead of being the attackers, we have been attacked by the Boers? Our officers and men adopted independent firing solely because the Boers always employ it, and it had become the custom to imitate them in everything; *but* the Boers know the value of their ammunition, whereas our men do not. The Boer is a man who—accustomed to the use of a rifle since boyhood—knows the value of his cartridges, particularly as in peace-time he has had to pay for them himself; besides which, when he has fired off all the cartridges he has, he can get on his pony and ride away, whereas Tommy Atkins knows that there is plenty more ammunition for the asking where his comes from, and knows no penalty for firing too rapidly. In peace manœuvres he has been kept well supplied with ammunition by carts and mules that come up close and carriers who move along the firing line in a wonderfully courageous manner, so he does not see why there should be any lack of it now that he is firing at an enemy and not merely shooting at targets or with blank. It is somebody else's job to see to that. His business is merely to get up to the enemy and fire at him! *He's* not going to trouble himself about what will happen if he's left without ammunition!

Even were half the year to be spent in musketry training (which will never be sanctioned), I think it scarcely likely that we should succeed in making our young soldiers realise the absolute importance of economising their ammunition.

The many and great disadvantages of volley firing I can quite appreciate, but I can also realise the enormous value of having the expenditure of ammunition well under control.

Now, in order, if possible, to eliminate the disadvantages of volley firing while retaining its advantages, I bring forward a suggestion for a system which I have had in my mind for some years, and the marked success of which when lately tried at Ladysmith has induced me to write this article. The suggestion is this: That instead of firing volleys as we do now, sections and sub-sections should be trained to get "ready" and come up together to the "present" by word of command from their section commanders, but *each man to fire as he gets on to the object he is firing at.*

The advantages I claim for the above system are:—

1. That ammunition, being absolutely under the control of section commanders, would be expended to far better purpose, and there need be no waste.
2. The men accustomed to look continually for orders from their section commanders would be kept in hand and easier to handle, and not degenerate into a disorganised mob.
3. The results of the fire would be as good as those obtained from independent firing, probably better, as the men would not be allowed to fire unless it were seen by field-glasses that there was something to fire at.
4. Fire being under control would be concentrated on certain points, and even be brought to bear on the flanks of portions of the enemy's line, which is only possible when volley firing, for if a man be left to himself he naturally fires at the man he thinks is firing at him, straight to his front.

It is said that words of command are no longer possible with men so widely extended, as they have to be when exposed to modern rifle fire. Then I can only say that sections should be split up until units are obtained that are under control and obedient to orders, for control is absolutely necessary. My own experience is that one man can easily handle twelve or fourteen men by the use of the whistle to attract attention to commands, and, should the ground be open, as many as twenty.

This system would eradicate one of the chief disadvantages of volley firing, viz., that when men fire together by word of command the results of their fire are bad compared to those obtained from independent. Of course, I do not advocate the complete suppression of independent firing. At very short ranges, or when a rapid fire is required, it is the only form of firing that should be used. But I do think that we should not train our men to fire independently at all ranges and at all times. It would have been bad enough when men were not so widely extended, and a commander could supervise the firing of his section; but now that men must be widely extended, and trained as they should be to make the most of any cover that may exist by working for themselves and advancing individually, sections get broken. Though no longer in a nice straight line, they will still be able to obey the whistle and voice of their commander, and act on his word of command. Should they be permitted to exercise their own judgment in firing, as well as advancing and taking cover, they would soon get out of hand and all control would be lost.

As I said before, this does not matter when fighting the Boers; but how could one handle such a line smartly and without confusion, when there was a counter-attack of formed and well-disciplined troops, or a sudden charge of cavalry to be resisted? At such a critical moment, fired at from the front and charged in flank, would it be easy to regain the control so lightly abandoned?

I do not think it is necessary to advocate here the employment of volleys in the defence of a position, when men are stationary and generally fighting from behind cover, and can therefore be placed closer together, for volley-firing is then so essential and is so generally conceded, that its cause requires no pleading.

I attach the incident at Ladysmith, referred to above, by giving an extract from the account of one of the party.

"During the siege of Ladysmith I was stationed with my company in occupation of King's Post, facing Surprise Hill. A long-range gun on that hill caused much

annoyance to us, and my company officer suggested that selected shots from the company might be able to at least trouble the gun's crew. . . . The procedure was always the same, one man spotting; and immediately the word was given that some one was approaching the gun we all came to the 'ready' and fired *when the 'spotter' gave the order*. The fire was independent, each man firing *as he got aim*. In this manner . . . we silenced the gun for twenty-seven days."

N.B.—The italics are mine.

G. W. GORDON-HALL, Captain,
1st Yorkshire Light Infantry.

Limerick, 11th March, 1901.

NAVAL AND MILITARY CALENDAR.

APRIL, 1901.

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- 1st (M.) H.M.S. "Undaunted" arrived at Plymouth from China.
 - " " A Turkish troop-ship was wrecked in the Red Sea and 200 lives lost.
 - 2nd (T.) Lord Kitchener reported that Colonel Plumer had occupied Nylstroom and that General French had captured another 15-pounder and two pom-poms.
 - 4th (Th.) China formally declined to sign the Manchurian Treaty with Russia.
 - 5th (F.) H.R.H. the Duke of Cornwall and York presented South African War Medals, at Aden, to a number of officers, midshipmen, sailors, and marines.
 - " " Lord Kitchener reported that Colonel Plumer had occupied Potgieter's Rust, and that General French had made more captures, including another pom-pom.
 - 6th (Sat.) The Boers abandoned a 4.7 gun near Heidelberg.
 - " " The Generals of the Allied Forces in China decided to occupy the railway between Shan-hai-Kwan and Peking.
 - " " The Cuban Constitutional Convention rejected the United States offer of suzerainty.
 - 8th (M.) Colonel Plumer occupied Pietersburg without serious opposition. The enemy evacuated the place, but many prisoners, a 7-pounder, and much ammunition were taken.
 - " " A detachment of Lancers and Imperial Yeomanry was captured by the Boers near Aberdeen, Cape Colony.
 - 10th (W.) H.M.S. "Talbot" commissioned at Devonport for China.
 - 11th (Th.) A special Army Order was issued with regard to surrenders in the field.
 - " " The 4th British Infantry Brigade in China was broken up.
 - " " The 24th Battalion Imperial Yeomanry left Southampton for South Africa.
 - 12th (F.) Lord Kitchener reported the capture, near Dewetsdorp, of eighty Boer prisoners.
 - 13th (Sat.) H.R.H. the Duke of Cornwall and York presented a Colour and South African War Medals to the Ceylon Mounted Infantry, at Colombo.
 - " " Six Volunteer Service Companies left Capetown for England.
 - 15th (M.) Lord Kitchener reported that Colonel Sir H. Rawlinson rushed Smut's laager, north-west of Klerksdorp, and captured twenty-three prisoners, a 12-pounder, and a pom-pom.
 - 16th (T.) H.M.S. "Achilles" commissioned at Portsmouth for guard-ship at Malta.
 - 17th (W.) H.M.S. "Alexandra" paid off at Chatham.
 - " " Rear-Admiral A. K. Wilson, C.B., V.C., hoisted his flag on board "Majestic," and assumed command of Channel Squadron.

- 18th (Th.) H.M.S. "Revenge" commissioned at Chatham as flag-ship of Admiral Superintendent of Reserves.
- 19th (F.) Lord Kitchener announced that a party of the 9th Lancers had been ambushed, one officer and three men killed, and four men wounded.
- 20th (Sat.) A successful raid was made by Chinese rebels on the Manchurian Railway. About 150 versts of the line were torn up and nearly all the Russian guards killed.
- 21st (S.) Lord Kitchener reported that since the 18th inst. the captures from the enemy included 81 prisoners, 100,000 rounds of small arm ammunition, and 200 horses.
- 22nd (M.) Lord Kitchener reported a further capture of 242 prisoners, rifles, ammunition, etc.
- 23rd (T.) H.M.S. "Persens" left Sheerness for East Indies.
- " " H.M.S. "Pheasant" arrived at Plymouth from Pacific.
- " " A Proclamation was issued by Lord Kitchener to the effect that in future subjects of the King found in arms, or inciting others to rebel, would be arrested, and immediately tried by court-martial.
- 25th (Th.) H.M.S. "Undaunted" paid off at Devonport; and H.M.S. "Mohawk" at Chatham.
- " " Lord Kitchener reported following captures: 113 prisoners, 138 rifles, 98 horses, one 12-pounder Krupp gun, 15,000 small arm ammunition.
- 26th (F.) H.M.S. "Achilles" left Portsmouth for Malta.
- " " Lord Kitchener further reported 16 Boers killed, 320 captured, as well as a Maxim gun, 3,000 cattle, 6,000 sheep, and many carts.
- 28th (S.) Hans Botha's laager, between Standerton and Heidelberg, was stormed by the British and a large number of prisoners, stores, stock, etc., taken.
- 29th (M.) H.M.S. "Talbot" left Plymouth for China.
- " " Sir B. Blood discovered Z. A. R. documents at Roose-Senekal, and Van Rensburg's laager was captured with a Q.F. gun by Kitchener's fighting scouts.
- " " First Volunteer Contingent (1,100 officers and men) arrived in England from South Africa.

FOREIGN PERIODICALS.

NAVAL.

ARGENTINE REPUBLIC.—*Boletín del Centro Naval*. Buenos Aires: February and March, 1901.—"In Memoriam: Commodore Martin Rivadavia." "Naval Notes."

AUSTRIA-HUNGARY.—*Mittheilungen aus dem Gebiete des Seewesens*. No. 5. Pola: May, 1901.—"The Question of Submarine Boats." "The Determining of a Ship's Position by Means of Three Base Lines." "Foreign Naval Notes."

BRAZIL.—*Revista Marítima Brasileira*. Rio de Janeiro: February-March, 1901.—Has not yet been received.

FRANCE.—*Revue Maritime*. Paris: March, 1901.—"The Chronicles of Lorient from 1792 to 1800." "Our Ships of War and their Predecessors" (*continued*). "The Blockade of Brest, 1803-5." "Foreign Naval Notes." "The Mercantile Marine: "International Conference at Stockholm." "The Commerce and Navigation of the Port of Amsterdam in 1899." "The Yield of the French Fisheries and from Ostriculture in France and Algiers During the Second Quarter of 1900."

Le Yacht.—Paris: 6th April, 1901.—"The Question of Submarine Boats in England." "Yachting Notes." "The 160-H.P. Gasoline Motor of the United States

Submarine Boats." "The First-Class Battle-ship 'Carnot.'" 13th April.—"The Visit of the Italian Squadron to Toulon." "The Hospital-ship 'St. François d'Assisi.'" "Yachting Notes." "The Japanese Battle-ship 'Hatsuse.'" "Launch of the 'Celtic.'" "The Mercantile Marine: French and Foreign." 20th April.—"The Increase in the Cadre of Officers and the Rank of Corvette-Captain." "Yachting Notes." "The Trials of Small Models and the Determination of the Resistance of the Hulls at High Speed." "A Turbine Mail-Steamer." 27th April.—"The Future of Transports and our Mercantile Marine." "Yachting Notes." "The 'Independence': the Eventual Defender of the American Cup." "The new First-Class Battle-ship 'Iéna.'" "The Mercantile Marine."

Le Moniteur de la Flotte. Paris: 6th April, 1901.—"Espionage at Sea." "Chinese Affairs." "The President of the Republic at Toulon." 13th April.—"The Higher School of the Navy." "The President of the Republic at Toulon." "Colonial Notes." 20th April.—"The Higher School of the Navy." "The Italian Squadron at Toulon." "Chinese Affairs." 27th April.—"The Italian Squadron." "The Great Naval Powers." "M. de Lanessan's Speech." "Chinese Affairs."

La Marine Française. Paris: 15th April, 1901.—"Naval Portraits: Vice-Admiral Fournier." "A Problem: Submarine Navigation To-day." "Report of the English Water-Tube Boiler Committee." "An Erratum in the Article 'On the Defence of Corsica' in last number."

GERMANY.—*Marine Rundschau.* Berlin: May, 1901.—"Brandenburg Troops on the Fänö and Fünen Islands in the year 1659." "The Water-Tube Boiler Question in the German Navy." "Malta: Its Military History and Strategic Importance To-day." "Discussion on the Paper which appeared in the *Rivista Marittima* on the 'Fleet Programmes and Types of Ships,' by B. Cuniberti, Chief Engineer of the Italian Navy." "Discussion on the Determination of the Fighting Value of War-ships." "Discussion on the Article in April number of *Marine Rundschau*, 'On the Question of Triple Screws for Ships.'" "Naval Notes."

ITALY.—*Rivista Marittima.* Rome: April, 1901.—"The New Emigration Laws." "The Production and Utilisation of Artificial Cold on board Ships." "The Strategy of the Nineteenth Century." Letters to the Director:—"Rapid Cruisers of Moderate Displacement"; "On One of the Problems of Naval Cinematics." "Foreign Naval Notes."

PORTUGAL.—*Revista Portuguesa, Colonial e Maritima.* Lisbon: April, 1901.—"Studies on Emigration." "Colonial Agriculture" (*continued*). "The Deflector (an Essential Accessory of the Needle) in Use on board Ship." "Table of the Telegraph Stations of the Over-sea Provinces." "Foreign Naval Notes."

SPAIN.—*Revista General de Marina.*—Madrid: May, 1901.—"Nationality and Naval Force." "The Special Convention between Spain and France for the Delimitation of the Possessions of both Countries in West Africa, the Saharan Coast, and the Gulf of Guinea." "Colonisation of the African Territories." "The New Italian Battle-ships 'Vittorio Emanuele III.' and 'Regina Elena.'" "The Strategic Centre." "Yesterday and To-day." "Naval France." "The Harris New Magazine for Rifles." "An Account of the Cruise of the 'Rio de la Plata.'" "The Krupp Breech Mechanism." "Is a Navy Indispensable for Spain?" "The New English Armoured Cruiser 'Aboukir.'" "Naval Notes."

MILITARY.

AUSTRIA-HUNGARY.—*Militär-Zeitung.* Vienna: 4th April, 1901.—"Artillery Organisation." "New Waterways in Austria." "Inspections in the French Army." 12th April.—"Howitzer Divisions." "Necessity for the Increase of Service Pensions."

"The Military Importance of Waterways." 20th April.—"Mounted Battery Divisions." "The Two Years' Obligatory Service." "Benedek's Characteristics." 28th April.—"Mountain Artillery." "Benedek's Characteristics" (*concluded*).

Organ der Militär-wissenschaftlichen Vereine. Vienna: Vol. LXII., Part 3.—"The Captive Balloon in a Campaign." "The Employment of Artillery in a Campaign." "The Importance of Infectious Diseases in general and in the Army in particular." "Naval Interests and Naval Politics." "The Future Organisation of our Horse Artillery."

Mittheilungen über Gegenstände des Artillerie- und Genie-Wesens. Vienna: April, 1901.—"New Methods for Determining the Initial Muzzle Velocity of Projectiles." "Experimental Researches with regard to the Tension of Gas in Guns" (*continued*).

BELGIUM.—*Bulletin de la Presse et de la Bibliographie Militaires.* Brussels: 15th April, 1901.—"War Navies" (*continued*). "The Anglo-Boer War" (with 1 sketch, *continued*). "The New Field Artillery *Matériel* in Switzerland." "Cryptography—Its Use in War and in Diplomacy." 30th April.—"War Navies" (*continued*). "The Anglo-Boer War" (*continued*).

FRANCE.—*Revue du Cercle Militaire.* Paris: 6th April, 1901.—"Shorthand in Modern Armies." "Autumn Manœuvres—Notes on the Exercises of a Mixed Brigade." "Military Laws in the Dutch Parliament." 13th April.—"Shorthand in Modern Armies" (*continued*). "War and Humanity—Union of Women of France." "The Bulgarian Army—A School for Reserve Officers." "Napoleon—The Last Phase." 20th April.—"The Swiss Army—Artillery *Matériel*" (with sketch). "Shorthand in Modern Armies" (*concluded*). "A Republican General." 27th April.—"Study of the late General de Brack." "The English Army—Cyclists' Manœuvres" (with sketch). "Course of Foreign Languages—Russian." "New Ideas on Electrolysis."

Revue Militaire. Paris: April, 1901.—"Studies of the South African War, 1899-1900" (*continued*). "The Austro-Hungarian Manœuvres in 1900" (*continued*). "Military Events in China, 1900-1901" (*continued*). "Russian Expansion in Siberia" (*continued*).

Revue d'Histoire. Paris: April, 1901.—"The Campaigns of Marshal Saxe (*continued*). "Study of the Campaign of 1799" (*continued*). "The War of 1870-71—The Events of the 2nd August" (*continued*).

Journal des Sciences Militaires. Paris: April, 1901.—"Napoleonic Maxims" (*continued*). "Annam from the 5th July, 1885, to the 4th April, 1886" (*continued*). "The Great Frederick" (*continued*). "The Battle of Adowa, the 1st March, 1886" (*continued*). "The Question of the Tactical Employment of Q.F. Guns." "Cavalry or Mounted Infantry" (*concluded*). "A German Infantry Brigade in Action" (*continued*). "Morocco."

Le Spectateur Militaire. Paris: 1st April, 1901.—"The South African War" (1 sketch, *continued*). "The Ancient Corps of Marines" (*continued*). "The Campaign of 1809" (*continued*). "The Action of Peltre near Metz." 15th April.—"The South African War" (1 sketch, *continued*). "The Ancient Corps of Marines" (*continued*). "The Campaign of 1809" (1 sketch, *continued*). "The Action of Peltre near Metz" (*concluded*).

Revue d'Artillerie. Paris: April, 1901.—"The Exhibition of 1900: Service Small Arms, Russian Manufacture." "The Manufacture of Metallic Tubes without Welding." "The Use of a New Coast-Aiming Station." "Artillery Horses and Wagons" (with 2 plates, *continued*).

Revue du Service de l'Intendance Militaire. Paris: April, 1901.—"Wheat in Tunis." "Short History of Administration of Troops" (*continued*). "Contribution to the Study of the Freezing of Meats." "Analysis of an English Work, by Colonel G.

A. Furse, on the Organisation and Administration of Lines of Communication in the Field" (*continued*). "The Principal Food Products of the French Colonies—the Ivory Coast and the Somali Coast."

Revue de Cavalerie. Paris: April, 1901.—"Cavalry Generals—Arrighi de Casanova, Duke of Padua." "The German Cavalry the day after Spicheren." "Cavalry Corps" (*continued*). "The Lessons of the 16th August" (*continued*). "The Carrier Pigeon in the Cavalry" (*continued*).

Revue du Génie Militaire. Paris: May, 1901.—"Questions regarding Heating by Stoves." "Works published on Madagascar." "Analysis of and Extracts from Vauban's Correspondence" (*continued*).

GERMANY.—*Militär-Wochenblatt*. Berlin: 3rd April, 1901.—"The Change of Uniform." "History of the Bavarian Army." "The Grand Manœuvres of the Swiss Army in 1900." "A Reserve Officer's School in Bulgaria." 6th April.—"Service Instruction in its Educational Significance." "The Boer War" (2nd Part). "News from the Indian Army." "The *Unione Militare*." 10th April.—"The Application of Field Howitzers in Field and Siege Warfare." "The History of Wars and Military Criticism by Scientists." "Army Re-organisation in the United States." "Service Instruction in its Educational Significance" (*concluded*). "France's North African Campaign" (*continued*). 13th April.—"Winter Mountain Manœuvres of French Alpine Troops." "The Austro-Hungarian Landwehr." "Forests in Ancient Warfare." 17th April.—"General Otto von Parseval of the Royal Bavarian Infantry." "Measuring Distances." "A Posthumous Sketch of the Austrian General Freiherr von Kuhn." "A Scheme to Foster Love of the Sea in the German School Curriculum." "Military News from Russia." "French Artillery Gunnery Schools. 20th April.—"History of the 5th Grenadier Regiment of King Frederick I." "The Boer War" (2nd Part). "Guns for Measuring Distances." "English Artillery Operations in the South African War." 24th April.—"H.R.H. Frederick Grand Duke of Baden." "The Service Jubilee of His Excellency Lieut.-General von Hahnke." "Two Hundred and Seventy-five Years in the Service of the Fatherland under Kurfürst, King, and Emperor." 27th April.—"Two Hundred and Seventy-five Years in the Service of the Fatherland, under Kurfürst, King, and Emperor" (*concluded*).

Internationale Revue über die gesamten Armeen und Flotten. Dresden: April, 1901.—"Military and Naval News from Argentina, Austria-Hungary, Belgium, Denmark, France, Germany, Great Britain, Italy, Japan, Norway, Roumania, Russia, Servia, Spain, Sweden, Transvaal, Turkey, and United States." *Supplement 18*.—"Organisation, Command, and Employment of the Cavalry at the German Imperial Manœuvres in 1899 and 1900." "The Belgium Autumn Manœuvres of 1900" (with map). *French Supplement 25*.—"The German, French, and Russian Infantry Attack." "The Naval Q.F. 19-centimetre Gun with Central Pivot Cradle Mounting, Vickers System, at the Paris Exhibition" (with 1 plate). "Supplementary Notes on the Ammunition Used in the Transvaal War" (with 3 plates). "Gathmann Projectiles."

Neue Militärische Blätter. Berlin: 15th March, 1901.—"From the French Army." "The English Fleet." "Military Preparatory Instruction in France." "Criticism at Manœuvres." "The Lieutenant in Mufti."

ITALY.—*Rivista di Artiglieria e Genio*. Rome: March, 1901.—"On the Minimum Velocity of Projectiles." "Michele Sanmicheli (1484-1548)." "The Action of Explosives on Guns" (*concluded*). "Appreciation of the Results of Fire and the Best Method of Firing against Captive Balloons." "The French Field Artillery." "Cordite and Lyddite." "The Daudetan Rifle." "Studies and Experiments by Professor Pupin on Telephonic Transmission through Long Distances." "Regulations for the Austrian Foot Artillery School of Firing." "Foreign Military Notes."

Rivista Militare Italiana. Rome: April, 1901.—"By the Alps or by the Sea?" "Artillery for Mountain Troops." "The Work of a Famous Writer on Fortification in

the 16th Century and the Modern Defensive Art." "The Tactics of Infantry during the last Quarter of the Century and the Battle of the Three Arms." "The Career of Officers in the Austro-Hungarian Army." "The Military Occupation of Manchuria by Russia." "English Militia and Volunteers."

PORTUGAL.—*Revista de Engenharia Militar*. Lisbon: March, 1901.—"Defensive Organisation of the City and District of Lourenço Marques" (*continued*). "A Commission of Military Engineers for Portuguese Guinea" (*continued*). "The Walls of Lisbon" (*continued*).

Revista de Infanteria. Lisbon: May, 1901.—"A Tithe of the Rent of Houses." "Military Exercises." "Night Marches and Actions." "The Duello in Armies." "Special Course of Instruction for Officers." "The Course of Instruction for the General Staff." "Foreign Military Notes."

RUSSIA.—*Voënnnyi Sbornik*. January 1901.—"Russia and Turkey before the Pruth Campaign." "Politics and Strategy During the War of 1812." "The Scheme of Instruction for Field Service." "Notes on the Life, the Condition, and Preparedness for War of the French Infantry" (*continued*). "Notes on Cavalry." "The Tactics of Q.F. Artillery." "Trials of Wireless Telegraphy in the 148th Caspian Infantry Regiment." "The Economic Situation of the 14th Infantry Division during the War of 1877-78." "Dress and Equipment of Men and Horses in the Field." "Strietensk and its Lines of Communication for the Forwarding of Troops and Baggage in the Theatre of Operations in 1900." "In Bulgaria During the Autumn of 1899." "The Yakchas Cossacks." "On the King's Service." "V. V. Krestovsky as a Military Writer." "Development of the Bases of Military Organisation in Western Europe in the 19th Century."

February, 1901.—"Russia and Turkey before the Pruth Campaign" (*continued*). "Politics and Strategy during the War of 1812" (*continued*). "The Scheme of Instruction for Field Service" (*continued*). "Notes on the Life, Condition, and Preparedness for War of the French Army" (*concluded*). "Saddle Horses the Property of Officers of the Field Artillery." "Trials of Wireless Telegraphy in the 148th Caspian Infantry Regiment" (*concluded*). "The Economic Situation of the 14th Infantry Division during the War of 1877-78" (*continued*). "Dress and Equipment of Men and Horses in the Field" (*continued*). "Exploration in Saïany." "In Bulgaria during the Autumn of 1899" (*continued*). "Khinghau." "Krasnoff, the Cossack Writer." "Recruiting in 1899." "The Grand Manœuvres in Germany, Austria-Hungary, and France in 1900." "War."

March, 1901. "Golovtchino, the 5th July, 1803." "Politics and Strategy During the War of 1812" (*continued*). "The Scheme of Instruction for Field Service" (*continued*). "Is the Lance Necessary for Cavalry?" "On the Organisation of Field Artillery." "The Economic Situation of the 14th Infantry Division during the War of 1877-78" (*concluded*). "Exploration in Saïany" (*concluded*). "In Bulgaria during the Autumn of 1899" (*concluded*). "Remarks on the Various Breed of Horses in Siberia." "Development of the United States Forces After the War with Spain."

SPAIN.—*Memorial de Ingenieros del Ejército*. Madrid: April, 1901.—"The Railway Battalion and the Relaxations of Employés on the Cáceres Railway." "Effect of Grease on Boilers and the Means of Remedying Them." "A Sidereal Chronometer." "Foreign Military Notes."

Revista Técnica de Infanteria y Caballeria. Madrid: 1st April, 1901.—"A New Method of Instruction for Recruits" (*continued*). "The Cavalry Arm and Tactical Regulations: The Use of its Weapons" (*continued*). "The Religious Sentiment in War." "Military Science at Athens." "Recruits and Instructors." "The Anglo-Boer War." 15th April.—"A New Method of Instruction for Recruits"

(continued). "The Cavalry Arm and Tactical Regulations: The Use of its Weapons" (continued). "Formations and Evolutions of the Company and Battalion." "Military Science at Athens" (continued). "Automobiles as a Means for the Transmission of Orders and Reports." "An Opinion on the Fool of the Soldier." "Spain and the Region of the Muluya: Its Dominion and Exploitation."

SWITZERLAND.—*Revue Militaire Suisse*. Lausanne: April, 1901.—"The Ehrhardt Q.F. Artillery Matériel." "The German Regulation for the Service of Armies in the Field" (concluded). "The French Army Manœuvres in Beauce." "Field Guns with Long Recoil." "A New Tactical Scheme."

UNITED STATES.—*Journal of the United States Artillery*. Fort Monroe, Virginia: March-April, 1901.—"Spanish Ordnance in the Defence of Havana." "Shipbuilding in Germany and the Imperial German Navy." "The Second Boer War." "The Development of the Krupp Field Artillery Matériel." "A Discussion of the Errors of Cylindro-Ogival Projectiles." "Professional Notes."

BOOK NOTICE.

The Story of the War in South Africa. By Captain A. T. MAHAN. London: S. Low Marston & Co., 1900.

We confess we hardly understand the motive which led Captain Mahan to embark on the work now before us, for no one has grasped to better purpose than he the need for the most careful sifting of evidence before drawing general conclusions, and of first-hand evidence from competent witnesses he appears to have had neither more nor less before him than the ordinary readers of the daily papers.

Moreover, the internal evidence supplied by the book itself shows that he has no adequate knowledge of modern tactical evolution to enable him to appraise the testimony of his witnesses at their true value. Fortunately, his sound common sense saves him from the many pitfalls his less gifted competitors have failed to avoid, but it is disheartening to find him advancing tentatively as matters of opinion suggestions which are as sound in fact as mathematical proof can make them. We allude especially to his remarks on page 59 as to the influence of modern arms on the question of attack or defence.

Again, he hardly seems to have sufficiently appreciated the enormous advantage their superior mobility conferred on the Boers, and the effect of this power in modifying existing relations between opposing forces.

Briefly, superior mobility gave the Boers choice of position and time to fortify. It rendered nugatory all our attempts to turn their flanks, and, by enabling them to withdraw on fresh horses when threatened by a close attack, rendered it possible to them to occupy an extent of front altogether out of proportion to their numbers.

Assume, for instance, the Boers in position at Magersfontein, but suddenly deprived of their powers of rapid locomotion. Then, since a Mauser magazine rifle cannot deliver four times as many aimed rounds a minute as, say, the old Chassepot, and 5,000 Chassepots to the mile has been shown over and over again to be inadequate to resist a resolute, well-combined attack, five hundred magazine rifles would not have been half enough to hold the same extent of front, and hence, instead of a front of twenty miles, they could at most have held only ten. Not only would this have placed our slow moving infantry at a far less disadvantage for outflanking, but because the Boers would have stood thicker our fire would have taken effect on any given portion of the front, proportionately more rapidly; and because the irruption of our troops with bayonets and lances

at any one point would have threatened most unpleasant consequences to men who could not run away as fast as we could pursue after them, they would not have held out so long in their positions; and the range and time of exposure being less, the target—i.e., our infantry—would have received fewer hits. If only some of our many critics would work out the “engagements”—there have been no real “battles”—on the assumption that the Boers were limited to ordinary infantry rates of marching, they would be astonished at the very slight effect which the magazine rifles, pom-poms, and even smokeless powder, have exercised upon the results, and how substantially sound our views on tactics, using the term generally, expressed in our drill books actually were.

With these reservations, the book is one to be read and studied attentively, and affords a further proof, if any were needed, as to the value of a thorough training in military history to prevent the panic arising from false conclusions.

PRINCIPAL ADDITIONS TO LIBRARY DURING APRIL, 1901.

Routes to Sikkim. Compiled in the Intelligence Department of the Quarter-Master-General in India. By Captain W. F. O'CONNOR, R.G.A. F'cap. fol. Calcutta, 1900.

History and Services of the 78th Highlanders (Ross-shire Buffs), 1793-1881. 2 vols. By Major H. DAVIDSON. Demy 4to. Edinburgh and London, 1901.

My Experiences of the Boer War. By COUNT STERNBERG. Translated, with an Introduction, by Lieut.-Colonel G. F. R. Henderson. 8vo. London, 1901.

Geschichte des Bayerischen Heeres. Herausgegeben vom K. B. Kriegsarchiv. 8vo. Munich, 1901.

Annual Report of the Board of Regents of the Smithsonian Institution for the Year ending June 30th, 1898. 8vo. Washington, 1899.

Supplement to the Handbook of the Soudan. By Major COUNT GLEICHEN. 8vo. London, 1899.

A Year in China, 1899-1900. By CLIVE BIGHAM. 8vo. London, 1901.

In Thibet and Chinese Turkestan. By Captain H. H. P. DEASY. 8vo. London, 1901.

These from the Land of Sinim. Essays on the Chinese Question. By Sir ROBERT HART. 8vo. London, 1901.

The Lancashire Fusiliers' Annual. Number X. Compiled and Edited by Captain B. SMYTH. 8vo. Dublin, 1901.

The Green Horse in Ladysmith. By Lieut.-Colonel ST. JOHN GORE. 8vo. London, 1901.

War's Brighter Side. By JULIAN RALPH. 8vo. London, 1901.

Five Years of My Life. By ALFRED DREYFUS. Translated from the French by James Mortimer. 8vo. London, 1901.

Der Siebenjährige Krieg 1756-1763. Herausgegeben von Grossen Generalstabe. Dritter Theil. Erster Band. 8vo. Berlin, 1901.

Minutes of Proceedings—Institution of Civil Engineers. Vol. CXLIII. 8vo. London, 1901.

The Siege of the Peking Legations. By Rev. ROLAND ALLEN. 8vo. London, 1901.



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Bust by the Austrian Sculptor, Franz Thaller, Vienna, 1801.
In the possession of Earl Nelson.

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